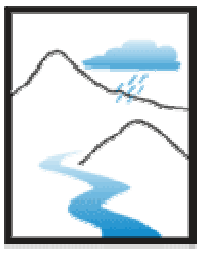

RIVERSIDE COUNTY
DRAINAGE AREA MANAGEMENT PLAN

SANTA ANA AND SANTA MARGARITA REGIONS

APRIL 2007

Santa Ana Watershed
Drainage Area Management Plan
Summary of Changes since 2006 Annual Report

Notice of Intent and Notice of Termination for Construction Activities under the Municipal Permit		
Notice of Intent		
Added fields for email and fax number for owner's and contractor's information	Phone ( ) –	Phone ( ) – Fax ( ) – Email :
Notice of Termination		
Added fields for email and fax number for owner's and contractor's information	Phone ( ) –	Phone ( ) – Fax ( ) – Email :

Sanitary Sewer Overflow Procedures		
Description	**April 2006**	**December 2006**
Attachment A (Sewering Agency Contact Roster)		
Contact information change for the City of Hemet		Police Dispatch: 951.765.2400
Contact information change for the Elsinore Valley Municipal Water District		After Work Hours: (951) 258-9299
Contact information change for the Lake Hemet Municipal Water District	Mr. Robert Allen Fax 951.766.7031	Mitch Freeman (Sr W. Operator), Jeff Wall (Chief Engineer) 951.658.3241 ext. 247; 951.658.3241 ext. 238 After Work Hours: 951.956.4836; 951.970.8970 Fax 951.766.7031

		mfreeman@lhmwd.org
Contact information change for the Rubidoux Community Services District		After Work Hours: 951.684.7580 dballow@rcsd.org
Contact information change for the Yucaipa Valley Water District	909.208.6347 (cell)	After Work Hours: 951.789.5109
Contact information change for the City of Corona	Mr. Gary Reid 951.736.2233 Fax 951.279.3695 Cell 951.830.1455 Gary.reid@ci.corona.ca.us	Rudy Fandel 951.736.2476, After Hours: 951.736-2223 Fax 951.739.4909 Rudy.fandel@ci.corona.ca.us
Contact information change for the City of Riverside		After Work Hours: 951.351.6140
Contact information change for the Jurupa Community Service District		Fax: 951-685-1153
Contact information change for the Lee Lake Water District	Mr. Harry Riebe or Mr. John Pastore 760.479.4120	Ken Codwell (Plant Super.) Mr. Harry Riebe (Eng.) Jeff Pape (GM) During Work: 760.277.1414; 760.479.4120; 951.277.1414 After Work: 951.830.3651; 760.473.4120; 760.250.9658
Contact information change for the Western Municipal Water District	951.789.5114 (during working hours) bbeam@wmwd.com	951.789.5114 (during working hours) westernops@wmwd.com
Attachment C (MS4 Permittee Contact Roster)		
Contact information change for the City of Canyon Lake	Kathy Bennett 951.244.2955 Fax 951.246.2022 Cell 951.237.2222 Home 951.471.2873 Kathy@cityofcanyonlake.com	Robert Bohan, Senior Special Enforcement Officer 951.244.2955 Fax 951.246.2022 Cell 951.265.1796 Home 951.244.3935(Deputy)

		Kathy@cityofcanyonlake.com
Contact information change for the City of San Jacinto	Mr. Tim Hults 951.487.7330 Fax 487.6779 thults@sanjacintoca.us	Mike Emberton (Public Works Director), Aaron Anderson (Utilities Super.) 951.654.4041, Cell: 951.538.9499, Pager: 951.765.8197 Fax 951.487.7382 Memberton@sanjacintoca.us; Aanderson@sanjacintoca.us;

Water Quality Management Plan (WQMP)		
Description	**September 17, 2004**	**July 24, 2006 update**
Through-out document References to web page changed:	www.swrcb.ca.gov	www.waterboards.ca.gov
Section 4.0 - Project-Specific WQMP Preparation (page 8) Edit to sentence (1st paragraph, 1st sentence)	Prior to submitting…	Category projects must submit…
Section 4.3 - Identify Pollutants of Concern (page 12)		
Edit to sentence (3th paragraph)	…pollutants expected to be generated by the project	… potential pollutants of concern generated by the project.
Section 4.3 - Identify Pollutants of Concern (page 12) Edit to sentence (4th paragraph, last sentence)	See Section 4.5, ….	See Section 4.5.3, ….
Section 4.5.2.1 - Non-Structural Source Control BMPs (page 19) Edit to sentence (9th paragraph, last sentence)	The project applicant shall request these materials (in writing) at…	The project applicant shall request these materials at…

Exhibit B – Potential Pollutants Generated by Land Use Type (page B-2) Edit to each Expected (E) value	E	P

WQMP Template		
	Previous Version	**August 23, 2006 update**
File format	*.doc format	*.dot format
Protection	None	Password-protected
Fill-in forms	Incompatible w/ current Word versions Yellow highlights	Upgraded to Word 2003 & fixed bugs Removed yellow highlights
Yes/No/NA Inputs	Type-in only	Check boxes
Instructions	In fill-in field only	Special section above fill-in fields
Automatic field updates	Project title, tract/development nos., owner/preparer info, document date	Fixed bugs & added auto-update for page numbers.
Section I	Planning Area/Community Name	Planning Area/Community Name/Development Name

Best Management Practices (BMP) Design Handbook		
Description	**September 17, 2004**	**July 24, 2006 update**
Table 2 - Potential Pollutants Generated by Land Use Type (page 2) Table correction	Table has been updated to be consistent with WQMP Exhibit B table	
Table 3 - Treatment Control BMP Selection Matrix (page 3) Table correction	Table has been updated to be consistent with WQMP Table 3	
Austin Sand Filter Design Procedure *3. Sedimentation Basin Design (page 37)* Formula correction	Width = A_s / (3) Length = (2) x (width)	A_s = 2 x W^2 length = 2 x width
Worksheet 7 - Design Procedure Form for Austin Sand Filter (page 43 and 44) Formula correction	Width = A_s / (3) $V_r \geq V_f$?	A_s = 2 x W^2 $V_r \leq V_f$,
Appendix B - BMP Design Examples		
cover sheet (page 65) Typographical error change	Austin San Filter	Austin Sand Filter
Extended Detention Basin Example Calculation/value change *Datasheet, Worksheet 1: Item 2.b, and Worksheet 3: Item 1.a.*	A_{total} = 80 acres	A_{total} = 40 acres
Typographical error change *Through-out datasheet* *Total Basin Volume check:* *Forebay Design:* *Basin Outlet, For this size orifice:*	✍ …(108% V_{BMP}) ? V_{BMP} …((4* $Area_F$)/ ?) = 89.9 …27 hours ? 24 hours	→ …(108% V_{BMP}) ≥ V_{BMP} …((4* $Area_F$)/ π) = 89.9 …27 hours ≥ 24 hours

Best Management Practices (BMP) Design Handbook		
Description	**September 17, 2004**	**July 24, 2006 update**
	…60 hours ? 48 hours	…60 hours ≥ 48 hours
Grass Swale Example Calculation/value change *Datasheet* *Table 4: Runoff Coefficients for an Intensity and Worksheet 2: Item 2* *Worksheet 2: Item 4* *Worksheet 2: Item 5 and Worksheet 9: Item 1* *Worksheet 9: Item 1*	 Q_{BMP} = 9.27 cfs slight coefficient value changes through-out table C = .579 Q_{BMP} = 9.27 ft^3/s D = 0.42 (5") ft	 Q_{BMP} = 9.31 cfs C = .582 Q_{BMP} = 9.31 ft^3/s D = 0.41 (5") ft
Austin Sand Filter Example Typographical error change *Datasheet and Worksheet 7: Item 1* *Through-out datasheet* *Filter Basin Design:*	 A_{total} = 80 acres ✍ ….= 10164 ft^3 ? V_{fb} ….= 8469 ft^3 ? V_{fb}	 A_{total} = 40 acres → ….= 10164 ft^3 ≥ V_{fb} ….= 8469 ft^3 ≥ V_{fb}
Worksheet 7: Item 4.d.	$V_r \geq V_f$?	$V_r \leq V_f$,
Infiltration Basin Example Calculation/value change *Datasheet and Worksheet 1: Item 4* *Datasheet: 3. Trench Surface Area* *Worksheet 4: Item 1b* *Worksheet 4: Item 3*	 V_{BMP} = 1.13 in-acre V_{BMP} = 0.0942 ft-acre V_{BMP} = 4103 ft^3 A_m = 5952 feet = 0.1366 Acres V_{BMP} = 4103 ft^3 A_m = 5952 feet	 V_{BMP} = 1.12 in-acre V_{BMP} = 0.093 ft-acre V_{BMP} = 4051 ft^3 A_m = 5880 ft^2 = 0.135 Acres V_{BMP} = 4051 ft^3 A_m = 5880 feet
Filter Strip Example Calculation/value change *Table 4: Runoff Coefficients for an Intensity and Worksheet 2: Item 2*	 slight coefficient value changes through-out table	

Best Management Practices (BMP) Design Handbook		
Description	**September 17, 2004**	**July 24, 2006 update**
Worksheet 2: Item 4 *Worksheet 10: Item 1* *Worksheet 10: Item 2*	C = .83 Q_{BMP} = .211 cfs W_m = 42.2 ft	C = .82 Q_{BMP} = .21 cfs W_m = 42 ft

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1.0 EXECUTIVE SUMMARY

This update of the Drainage Area Management Plan for the Santa Ana and Santa Margarita Regions (DAMP) addresses the requirements of the municipal separate storm sewer system (MS4) Permits issued to the Riverside County Permittees by the Santa Ana Regional Water Quality Control Board (Regional Board) in 2002 and the San Diego Regional Board in 2004, and incorporates programs developed since 1993. These are the third MS4 permits issued by each Regional Board and are referred to as the "Third-term" MS4 Permits.

The update of the DAMP was conducted in two phases. In the first phase, the DAMP was updated to specifically address the requirements of the Third-term Santa Ana Region MS4 Permit. A revised DAMP was submitted to the Santa Ana Regional Board in January 2005 for approval by the Executive Officer as specified in Section XIII.A of the Third-term Santa Ana Region Permit. Following submittal of the revised DAMP to the Santa Ana Regional Board, additional revisions were made to address requirements specific to the Santa Margarita Region (SMR). The revisions for the Santa Margarita Region do not affect the programs implemented in the Santa Ana Region.

The DAMP describes a wide range of continuing and enhanced Best Management Practices (BMPs) and control techniques, which are being implemented during the five-year terms of the Third-term MS4 Permits and describes the overall Urban Runoff management strategies planned by the Permittees in the Santa Ana and Santa Margarita Regions of Riverside County. The DAMP has been prepared to meet the complex Urban Runoff management needs in the Santa Ana and Santa Margarita Regions consistent with the Third-term MS4 Permits. The DAMP must address the needs and constraints of the Permittees and the requirements of the Third-term MS4 Permits.

A glossary of terms is provided as Appendix A. Throughout the DAMP equivalent terms from the Third-term MS4 Permits have been standardized. For example, the term "Standard Urban Stormwater Management Plan (SUSMP)" referenced in the Third-term SMR Permit is referred to as the "Water Quality Management Plan (WQMP)".

The requirements of the Watershed SWMP (Provision K.2. of the Third-term SMR permit) are addressed throughout the DAMP. In addition, Appendix S contains a separate "Watershed SWMP" section that describes how Provision K.2 requirements are specifically addressed by the DAMP.

2.0 INTRODUCTION TO THE DRAINAGE AREA MANAGEMENT PLAN

The DAMP is a programmatic document developed by the Permittees and approved by the Executive Officers of the Santa Ana and San Diego Regional Boards. It is the principal document that translates the MS4 Permit requirements into programs and implementation plans. The DAMP is used by the Permittees in their development of individual ordinances, plans, policies and procedures to manage Urban Runoff.

The initial DAMP was prepared in February 1993 (subsequently referred to as 1993 DAMP) in compliance with the requirements of the First-term MS4 Permits issued by the Santa Ana and San Diego Regional Boards. This DAMP outlines the major programs and policies that the Permittees individually and/or collectively develop and implement to manage Urban Runoff in compliance with the Third-term MS4 Permits issued by the Santa Ana Regional Board in 2002 and the San Diego Regional Board in 2004. The primary program elements are illustrated in Figure 2-1. Additional program elements were also developed to address specific compliance needs. "Supplement A" to the DAMP was developed in April 1996 to provide guidance in the selection and design of storm water quality controls for development projects. The Municipal Facilities Strategy and Enforcement Compliance Strategy were developed as required by the 1998 MS4 Permit issued by the Santa Ana Regional Board. These program elements have been incorporated into the DAMP.

The area of Riverside County covered by the MS4 Permit issued by the Santa Ana Regional Board is referred to as the Santa Ana Region (SAR) and the area covered by the MS4 Permit issued by the San Diego Regional Board is referred to as the Santa Margarita Region (SMR). The Permittees of the Third-term MS4 Permits and their associated regions are:

- Riverside County Flood Control and Water Conservation District (District) (SAR, SMR)
- County of Riverside (SAR, SMR)
- City of Beaumont (SAR)
- City of Corona (SAR)
- City of Hemet (SAR)
- City of Lake Elsinore (SAR)
- City of Moreno Valley (SAR)
- City of Murrieta (SAR, SMR)
- City of Norco (SAR)
- City of Perris (SAR)
- City of Riverside (SAR)
- City of San Jacinto (SAR)
- City of Calimesa (SAR)
- City of Canyon Lake (SAR)
- City of Temecula (SMR)

The District has been designated Principal Permittee in both MS4 Permits and the remaining 14 municipalities, including the County, are referred to as Co-Permittees.

2.1 PROGRAM OVERVIEW

The DAMP serves as the primary compliance document that describes the program elements necessary to comply with the Third-term MS4 Permits. The program elements and associated DAMP sections are identified in Figure 2.1.

Santa Ana Region Specific Element

In addition to the descriptions of program elements contained within the DAMP, each Permittee maintains documentation of their internal procedures for implementation of the program elements described in the DAMP. This documentation includes the following information:

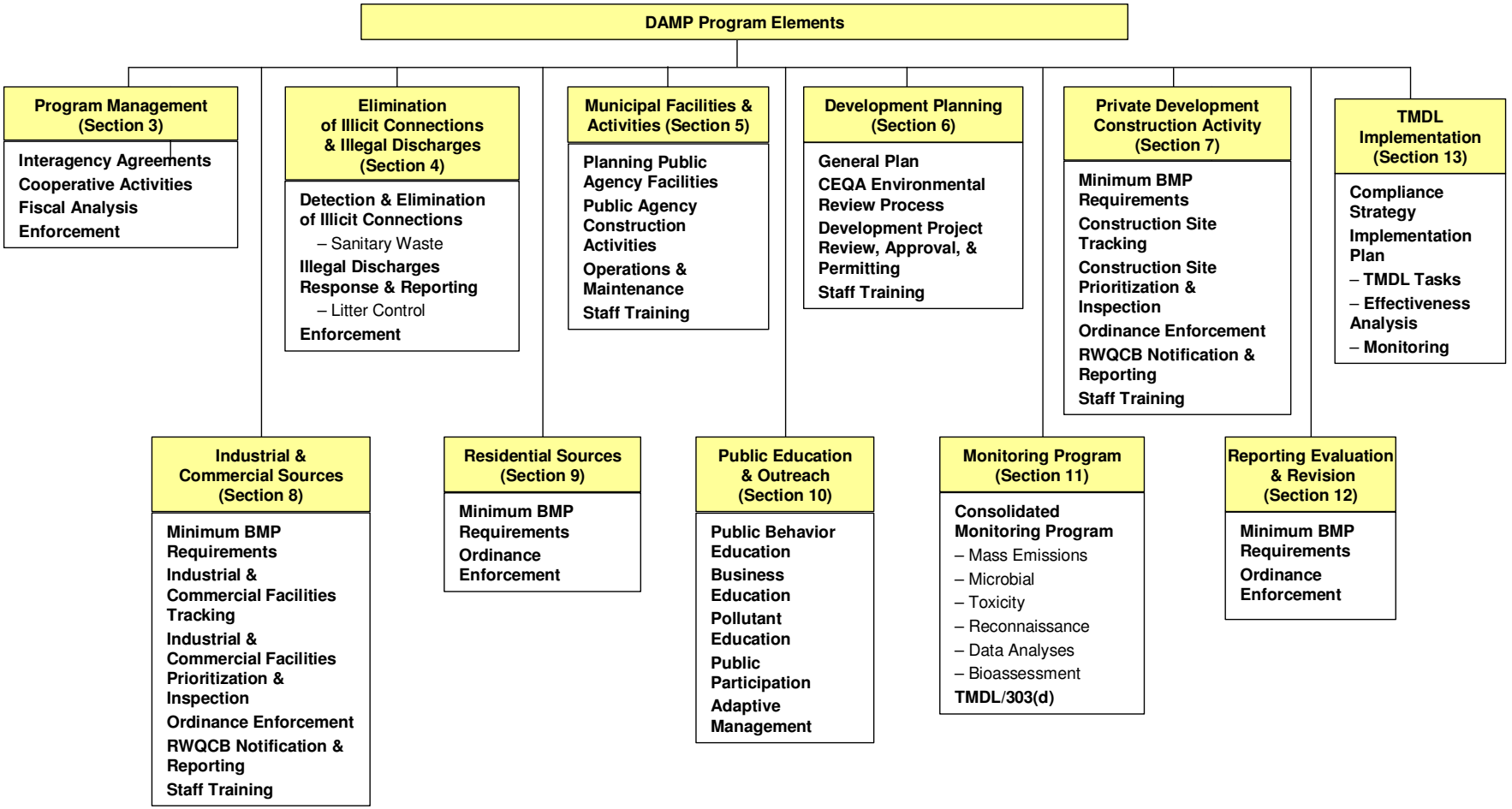
- Legal counsel certification of the Permittee's authority to implement the Third-term Santa Ana MS4 Permit requirements.
- Copy of the Permittee's storm water ordinance, grading/erosion ordinance and litter/trash control ordinance
- Illicit Connection/Illegal Discharge enforcement and compliance prioritization and response program (DAMP Section 4)
- Policy and Procedures for planning and design of Permittee projects subject to the Water Quality Management Plan (WQMP).
- Operation and maintenance schedule for the MS4.
- CEQA project application forms and initial study checklists
- Procedure for implementing development review, approval and permitting
- Construction site inspection program, database and inspection checklist
- Industrial/commercial inspection program, database and inspection checklist

These documents are reviewed and updates as necessary to keep up with changes within the Permittees jurisdiction and with changing local, state and federal regulations. These programs will remain, however, in compliance with the Third Term Santa Ana MS4 Permit and the programs outlined in this DAMP.

Santa Margarita Region Specific Elements

In addition to the descriptions of program elements contained within the DAMP, each Permittee maintains an Individual Storm Water Management Plan (Individual SWMP) that documents their internal procedures for implementation of the program elements described in the DAMP. In the Santa Margarita Region, the Permittees local program elements do not have to be in substantial conformance with the DAMP. The Permittees may choose to implement programs described in the DAMP or to implement alternative programs. However, the alternate programs must be in conformance with the requirements of the Third Term Santa Margarita Region MS4 Permit.

Figure 2-1. Program Elements of DAMP



2.2 REGULATORY FRAMEWORK

2.2.1 CWA Section 402(p) – NPDES Permitting for Storm Water Discharges

The Urban Runoff pollution control effort, of which this DAMP is part, is the result of over thirty years of legislative effort beginning with the Federal Water Pollution Control Act, which, as amended in 1972, is now referred to as the Clean Water Act (CWA). The CWA authorized that the discharge of pollutants to Waters of the United States from a point source is effectively prohibited unless the discharge is in compliance with a NPDES permit. In 1987 Congress amended portions of the CWA and included Section 402(p), which set requirements for permitting storm water discharges. Section 402(p) of the CWA required that the United States Environmental Protection Agency (USEPA) establish regulations setting forth a program of NPDES applications and corresponding permits for storm water discharges associated with industrial activities and for storm water discharges from MS4s. Section 402(p) of the CWA also requires that MS4 NPDES permits include:

- A requirement to effectively prohibit non-storm water discharges into the MS4; and
- Controls to reduce the pollutants in storm water discharges to the maximum extent practicable (MEP), including management practices, control techniques and system, design and engineering methods and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

USEPA's Final Rule for NPDES Permit Application Regulations for Storm Water Discharges became effective December 17, 1990 and is often referred to as the "Phase I storm water regulations." The Phase I storm water regulations are administered nationwide through the USEPA's NPDES program. California is authorized to issue NPDES permits under Section 402 of the CWA per agreement with the USEPA. The Phase I storm water regulations require that the management program for an MS4 include a comprehensive planning process which involves public participation and necessary intergovernmental coordination to reduce the discharge of pollutants to the MEP using management practices, control techniques and systems, design and engineering methods, and such other provisions which are appropriate. The Phase I storm water regulations also specify who is covered; prescribes a variety of required information-gathering, planning, and reporting activities; and sets forth a schedule for compliance. The Phase I storm water regulations also set forth requirements for specific industrial activities, including construction.

2.2.2 CWA Section 303(d) – Impaired Water Bodies

Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop lists of impaired waters and to update those lists every other year. These lists of impaired water bodies are typically referred to as the "303(d) List". In developing the 303(d) List "all existing and readily available water quality-related information" must be utilized. The listed water bodies are considered impaired because they do not meet water quality standards necessary to maintain designated beneficial uses, even after point sources of pollution have installed the minimum required levels of pollution control technology. The current 303(d) List can be viewed or downloaded from the following website: http://www.waterboards.ca.gov/tmdl/303d_lists.html.

A Total Maximum Daily Load (TMDL) specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and allocates pollutant loadings among point and nonpoint pollutant sources. The CWA requires that priority rankings be established for impaired waters [Receiving Waters on the 303(d) List] and that TMDLs be developed taking into account the severity of pollution and the beneficial uses of the water (fishing, swimming, municipal water supply, etc.).

2.2.3 Santa Ana Region

In response to the Phase I storm water regulations, the Permittees obtained an "Early" MS4 Permit[1] from the Santa Ana Regional Board (NPDES No. CA 8000192, Order No. 90-104) on July 13, 1990, for Urban Runoff from areas in Riverside County within the SAR. The SAR MS4 Permit was renewed in 1996 (Second-term MS4 Permit) with the following additional requirements:

- Develop an "Enforcement/Compliance Strategy" (E/CS) that addresses compliance with regard to industrial and commercial facilities as well as construction sites;
- Assess Permittee activities and facilities for potential impacts to Urban Runoff quality and then develop a "Municipal Facility Strategy" (MFS) based on the assessment;
- Identify post-construction source pollutant prevention and treatment measures that could be incorporated into development projects (New Development Guidelines, Supplement A to the 1993 DAMP).

The Second-term MS4 Permit also explicitly recognized that there are areas of Riverside County within the jurisdictional area of the Santa Ana Regional Board that are not:

- Subject to the Phase I storm water regulations;
- Under the jurisdiction of the State of California; nor
- Under the jurisdiction of the Permittees.

Such areas or entities include:

- Federal and state lands, including, but not limited to, military bases, national forests, hospitals, colleges and universities, and highways;
- Utilities and special districts;
- Native American tribal lands;
- Non-urbanized areas; and
- Agricultural lands.

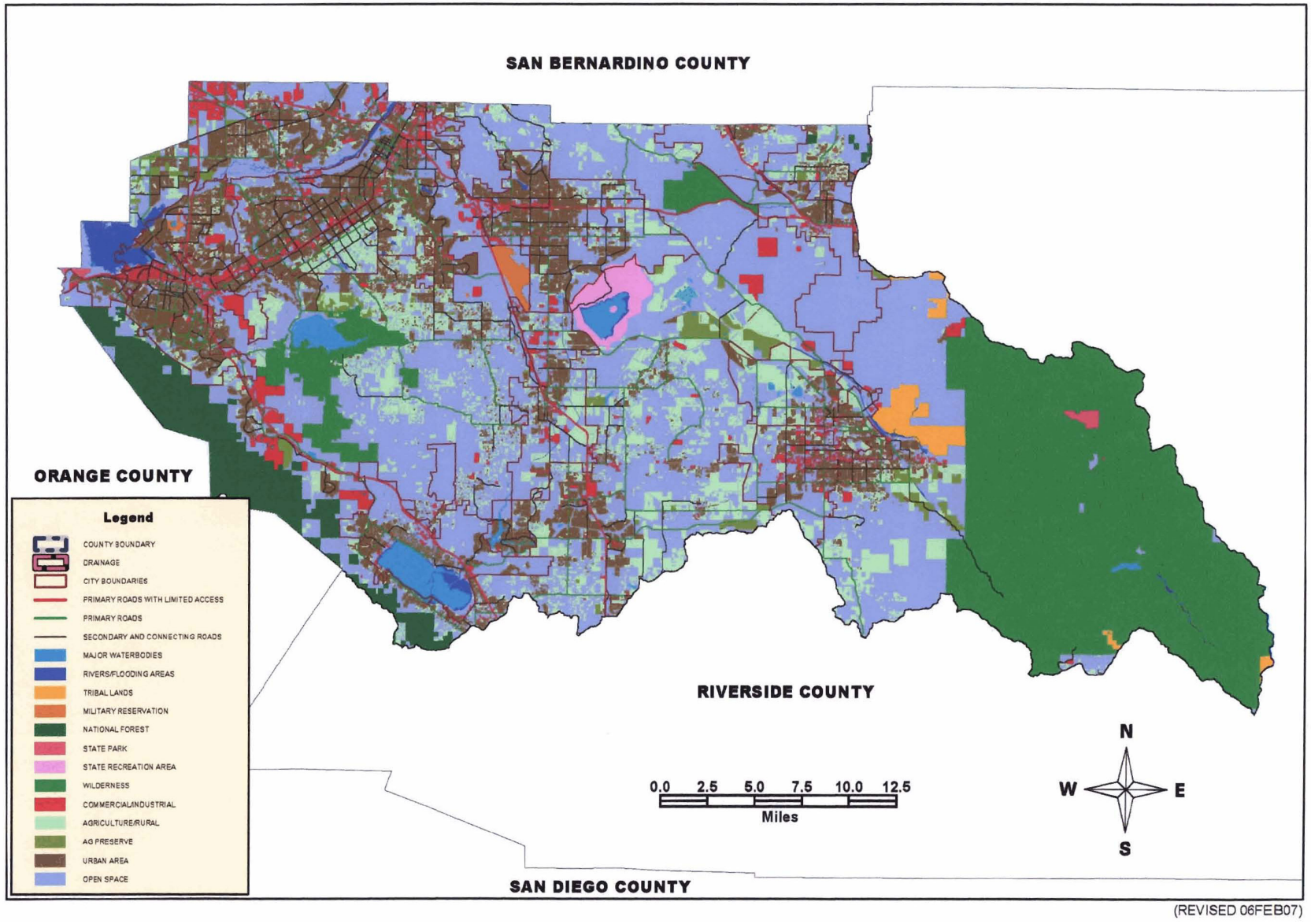
On October 25, 2002, the Santa Ana Regional Board adopted Order No. R8-2002-0011, NPDES No. CAS 618033 (Third-term SAR MS4 Permit). The areas excluded from coverage under the Second-

[1] Some municipalities applied for and received storm water discharge permits prior to the USEPA promulgation of the "Final Rule for NPDES Permit Application for Storm Water Discharges." Such permits have been referred to as "Early" permits.

term MS4 permit are also excluded from coverage under the Third-term SAR MS4 Permit. Figure 2-2 shows the SAR. A copy of the Third-term SAR MS4 Permit is included as Appendix B.

As with the prior SAR MS4 permits, the Third-term SAR MS4 Permit regulates discharges of Urban Runoff from MS4s within Riverside County under the jurisdiction of and/or maintenance responsibility of the Permittees. Further, the Third-term SAR MS4 Permit is intended to regulate the discharge of "pollutants" in Urban Runoff from anthropogenic sources under the control of the Permittees, and is not intended to address background or naturally occurring pollutants or flows. The Third-term SAR MS4 Permit required that the Permittees review and update their programs consistent with the current MEP standard as specified in the permit.

Figure 2-2. Santa Ana Region



2.2.4 Santa Margarita Region

In response to the Phase I storm water regulations, the District, the County and the City of Temecula obtained an "Early" MS4 Permit[2] (NPDES No. CA0108766, Order No. 90-46) in July 1990. On May 18, 1992, the City of Murrieta was added to that permit. This first MS4 Permit required the Permittees to develop an Urban Runoff management program and implement BMPs to control the discharge of pollutants to Waters of the U.S. During this time, the Permittees cooperatively developed the Santa Margarita Regional DAMP (SMR DAMP). The SMR DAMP described 35 BMPs implemented by the Permittees in their effort to control Urban Runoff pollution to the MEP. The San Diego Regional Board approved the SMR DAMP on April 26, 1996.

On January 17, 1995 the District, the County and the cities of Murrieta and Temecula (Permittees) submitted an application for renewal (referred to as a Report of Waste Discharge) of the SMR MS4 Permit. On May 13, 1998 the Regional Board adopted Order No. 98-02 renewing the SMR MS4 Permit. However, the USEPA Region IX (Region IX) objected[3] to the Order as adopted and issued a final SMR MS4 Permit (Permit No. CAS0108766) on April 27, 1999. Permit No. CAS0108766 became effective on May 30, 1999. On June 25, 1999, Region IX "returned" Permit No. CAS0108766 to the San Diego Regional Board for implementation. On November 8, 2000, the Regional Board issued Addendum No. 1 to Order No. 98-02 that incorporated, by reference, Permit No. CAS0108766 into their Order.[4] The District was designated as the "Principal Permittee" and the two cities and the County were identified as "Co-Permittees."

On July 14, 2004, the San Diego Regional Board adopted Order No. R9-2004-01, which is the Third-term SMR MS4 Permit. Figure 2-3 shows the SMR. A copy of the Third-term SMR MS4 Permit is included as Appendix C.

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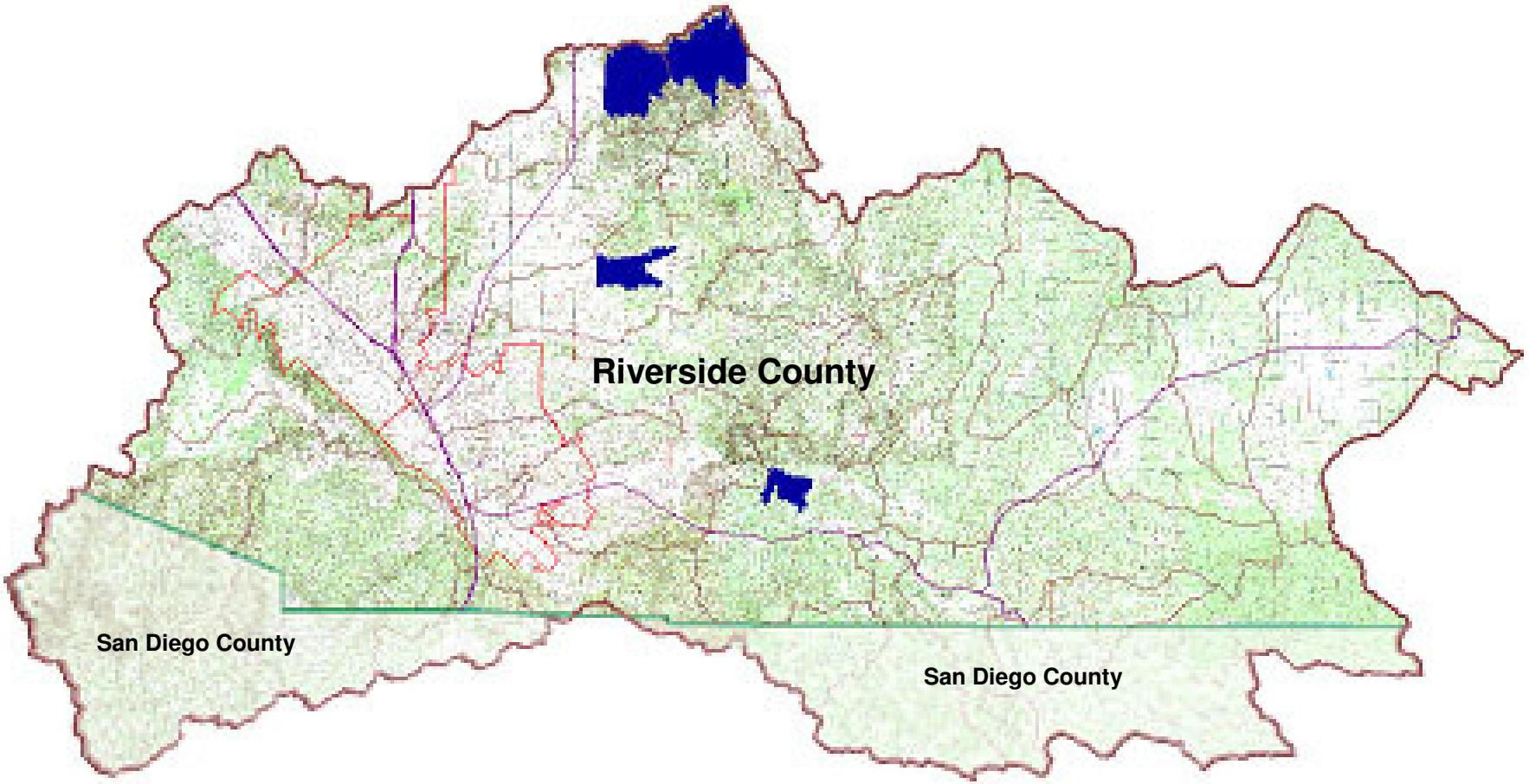
[2] Some municipalities applied for and received storm water discharge permits prior to the USEPA promulgation of the "Final Rule for NPDES Permit Application for Storm Water Discharges." Such permits have been referred to as "Early" permits.

[3] USEPA objected to the Receiving Water Limitations (RWL) in Order No. 98-02. The RWL in Order No. 98-02 were consistent with existing State Water Resources Control Board (SWRCB) policy as expressed in its Order WQ 98-01 adopted on January 22, 1998. SWRCB has subsequently modified its RWL policy to conform with USEPA Region IX's RWL policy by adopting Order WQ 99-05 on June 17, 1999.

[4] San Diego Regional Water Quality Control Board, Addendum 1 to Order No. 98-02, NPDES Permit No. CAS0108766, November 8, 2000.

Figure 2-3. Santa Margarita Region



2.3 SANTA ANA REGION WATERSHED BACKGROUND

2.3.1 Permit Area Land Use and Population Characteristics

The SAR is located in the northwestern corner of Riverside County. The SAR is bounded on the south by the Santa Margarita watershed, on the east by the Salton Sea watershed, on the south/west by Orange County and on the north/west by San Bernardino County. The Santa Ana River watershed, including the San Jacinto River sub-watershed, encompasses 1,603 square miles (22 percent of the 7,300 square miles within Riverside County) and includes 12 of the 24 cities within Riverside County. The California Department of Finance estimates that as of January 1, 2006, the population of Riverside County was about 1,953,330. About 1,232,980 of those persons (63% of the Riverside County population) live within the SAR—approximately 864,540 persons residing within the 12 municipalities[5] and an additional 368,440 persons residing in the unincorporated area. The areas of the most significant recent growth in population in the SAR include the Cities of Beaumont, Calimesa, and San Jacinto, and this trend is expected to continue between 2006 and 2010.

Based on Riverside County Assessor's Roll as of February 2006, general land uses within the portion of the Santa Ana River watershed within Riverside County are:

- 46.0 square miles zoned for commercial/industrial purposes (3.3 percent)
- 110.2 square miles zoned for residential purposes (7.9 percent)
- 15.3 square miles zoned for parks and recreational facilities (1.1 percent)
- 18.4 square miles zoned for streets and roads (1.3 percent)
- 109.6 square miles zoned for rural residential (7.9 percent)
- 709.3 square miles zoned for preserves or open space (50.8 percent)
- 76.0 square miles zoned for agricultural purposes (5.4 percent)
- 311.0 square miles of federal, state, tribal, and other lands that are not under the jurisdiction of the Permittees (22.3 percent)

Section 3.4.1 of the DAMP describes the limits of the Permittees' authority over discharges from federal, state and other lands. Although runoff from these areas may be discharged into the MS4 owned and operated by the Permittees, the Permittees do not have the authority to apply the DAMP to these entities.

The Draft Western Riverside County Multi-Species Habitat Conservation Plan prepared in November 2002 states that planned land uses indicate a shift in future use of land within Western Riverside County. At build-out, approximately 491,300 acres of currently vacant and agricultural lands are anticipated to shift to community development/rural uses.

[5] Population figures for the City of Murrieta have been omitted because only 375 acres (2%) of its land area is within the Permit Area.

2.3.2 Physiography and Geology

The Santa Ana River watershed represents one of nine major California watershed systems between Santa Barbara and the U.S.-Mexico Border at Tijuana. The SAR is located in the Peninsular Ranges and Transverse Ranges Geomorphic Provinces of Southern California (California Geological Survey Note 36). The highest elevations (upper reaches) of the Riverside County region of the watershed occur in the San Bernardino Mountains (San Gorgonio Peak with elevation 11,485 feet) and in the San Jacinto Mountains (Peninsular Ranges Province, Mt. San Jacinto with elevation 10,804 feet). The primary slope direction is northeast to southwest, with secondary slopes controlled by local topography.

As is true for much of California, the geology of the SAR is defined and created by seismic activity. The dominant structural feature is the San Andreas Fault zone, which trends in a southeast-northwest direction at the base of the San Bernardino Mountains. The major fault structures in the SAR include the San Jacinto fault zone and the Elsinore Fault Zone; the San Jacinto Mountains are caused by motion from both the San Andreas and San Jacinto zones. The area between the San Jacinto zone and the Elsinore Zones is a down-dropped block that is partly in-filled with sediments from the surrounding mountains.

There are too many geologic units in the SAR to describe separately, but the predominant features are intrusive rocks of the southern California batholith (granitic and andesitic rocks) that have been uplifted/eroded to form the mountain ranges, alluvial/fluvial sediments (materials eroded from the mountains and deposited in the basins), and semi-consolidated sedimentary units.

2.3.3 Climate

The climate of the SAR is Mediterranean with hot, dry summers and cooler, wetter winters. Average annual precipitation ranges from 10-13 inches per year in the inland alluvial valleys, reaching 36 inches or more in the San Bernardino and San Jacinto Mountains. Most of the precipitation in the SAR occurs between November and March in the form of rain with variable amounts of snow in the higher elevations. The climatological cycle of the Region results in high surface water flows in the spring and early summer followed by low flows during the dry season. Winter and spring floods generated by storms are not uncommon in wet years. The types of storms that occur in the SAR include:

- General winter storms during the period of December to March, inclusive. They originate over the Pacific Ocean as a result of the interaction between polar Pacific and tropical Pacific air masses and move eastward over the basin. These storms, which often last for several days, reflect orographic influences and are accompanied by widespread precipitation in the form of snow or rain.
- General summer storms usually occur during the period from July through September. They are associated with an influx of tropical maritime air originating over the Gulf of Mexico or the South Pacific Ocean and entering the area from a southeast to a southwest direction. Usually the influx of tropical air is caused by circulation about a high-pressure area centered in the southeastern United States, but occasionally it is caused by the remnants of a tropical hurricane. General summer thunderstorms are accompanied by heavy precipitation over large areas for periods up to 24 hours, but showers may continue for as long as three days.

- Local thunderstorms can occur at any time of the year, either during general storms or as isolated phenomena. However, they are most common during the period from July through September, when the Southern California area may be covered by moist unstable air originating over the Gulf of Mexico. These storms cover comparatively small areas and result in high intensity precipitation of short duration.

2.3.3.1 Surface Water

As the SAR is arid, there is little natural perennial surface water. Surface waters start in the upper erosion zone of the watershed - primarily the San Bernardino, Santa Ana and San Jacinto Mountains. This upper zone has the highest gradient and soils/geology that do not allow large quantities of percolation of surface water into the ground. Flows consist mainly of snowmelt and storm runoff from the lightly developed San Bernardino National Forest,

From the City of San Bernardino to the City of Riverside, the Santa Ana River flows perennially, mostly due to treated discharges from wastewater treatment plants. From the City of Riverside to Prado Dam, the flow in the Santa Ana River consists of highly treated wastewater and groundwater discharges, potable water transfers, irrigation runoff, groundwater forced to the surface by shallow/rising bedrock and minor amounts of Urban Runoff. Urban Runoff provides a proportionately greater contribution to the flow of the River during significant storm events.

Lake Elsinore is the only natural freshwater lake of any size in the SAR. A variety of water storage reservoirs (e.g., Lake Perris, Canyon Lake, and Lake Mathews) and flood control areas (Prado Dam area) have been created to hold surface water in Riverside County.

The San Jacinto watershed is part of the southernmost portion of the Santa Ana watershed. It is tributary to the Santa Ana River through Lake Elsinore and Temescal Wash. The 780 square mile watershed includes 18.1 square miles regulated by Lake Perris and Pigeon Pass dam. Major tributaries include Bautista Creek, Poppet Creek, Potrero Creek, Perris Valley Drain and Salt Creek.

The San Jacinto watershed is bounded by two strike-slip fault zones: the San Jacinto fault zone to the northeast and the Elsinore fault zone to the southwest. The San Jacinto Valley is among the most seismically active of the major strike-slip fault zones in southern California, and also the site of rapid subsidence (20 mm per year) due to tectonic activity and groundwater withdrawal (Morton, 1999). The rapid rate of subsidence has resulted in the formation of a strike-slip "pull-apart basin" or graben that has developed along parallel fault strands in the fault zone. The Elsinore fault zone is also a strike-slip fault zone and the subsidence along the fault formed Lake Elsinore. Due to the large amount of flood storage available in Lake Elsinore, flows from the San Jacinto River rarely reach the Santa Ana River.

Lake Elsinore and Canyon Lake are located at the terminus of the San Jacinto River watershed in southwestern Riverside County. Lake Elsinore is one of the few natural lakes in southern California. It was formed in a geologically active graben area and has been in existence over thousands of years. Due to the Mediterranean climate and watershed hydrology, lake level fluctuations in Lake Elsinore have been extreme, with alternate periods of a dry lakebed and extreme flooding. These drought/flood cycles have a great impact on lake water quality. Fish kills and excessive algal blooms have been reported in Lake Elsinore since the early 20th century. As a result, in 1994, the Santa Ana Regional Board placed Lake Elsinore on the 303(d) List of impaired waters due to excessive levels of nutrients.

Canyon Lake, located approximately five miles upstream of Lake Elsinore, was formed by the construction of Railroad Canyon dam in 1928. Approximately 735 square miles of the 780 square mile San Jacinto River watershed drains to Canyon Lake. Only during wet or moderately wet years does Canyon Lake overflow to Lake Elsinore; during most years, runoff from the watershed terminates at Canyon Lake without reaching Lake Elsinore, resulting in the buildup of nutrients in Canyon Lake. While Canyon Lake does not have as severe an eutrophication problem as Lake Elsinore, there have been periods of algal blooms. In 1998, the Regional Board added Canyon Lake to the 303(d) List of impaired waters due to eutrophication.

The high subsidence rate of the San Jacinto valley along the fault zone has resulted in a closed depression that periodically fills with water to form the ephemeral Mystic Lake. In very wet years, the surface area of Mystic Lake can expand up to 4000 acres. The San Jacinto River makes a 90-degree turn and flows southwest at Mystic Lake. The very low river gradient westward from Mystic Lake forms a broad fluvial plain. The San Jacinto River then flows through the narrow Railroad Canyon, Canyon Lake, and exits the Perris Block into the lower Elsinore basin created by the Elsinore fault zone.

2.3.4 Drainage Area Description

2.3.4.1 Surface Water Bodies

Less than one-fifth (1/5) of the entire acreage within Riverside County drains into waterbodies within the SAR. Those surface water bodies (or portions thereof) are:

Rivers and Streams

Santa Ana River, Reaches 3 and 4
- Tributaries to the south bank of the Santa Ana River
  - Temescal Creek, Reaches 1, 2, 3, 4, 5 and 6
    - Tributaries to Temescal Creek
      - Coldwater Canyon Creek and its tributary drainages
      - Bedford Canyon Creek and its tributary drainages
  - Tequesquite Arroyo (Sycamore Creek) and its tributary drainages
- Tributaries to the north bank of the Santa Ana River
  - Day Creek
  - San Sevaine Creek

San Jacinto River Basin
- San Jacinto River, Reaches 1, 2, 3, 4, 5, 6 and 7
- San Jacinto River, North Fork
- Bautista Creek, headwaters to debris dam
- Fuller Mill Creek
- Salt Creek
- Strawberry Creek
- Stone Creek
- Other tributaries: Indian, Hurkey, Poppet, and Potrero

San Timoteo Creek Basin
- San Timoteo Creek, Reaches 3 and 4 and tributaries
- Little San Gorgonio Creek and its tributaries

Lakes and Reservoirs

- Canyon Lake
- Lake Elsinore
- Lake Evans
- Lake Fulmor
- Lake Hemet
- Lake Mathews
- Lake Perris
- Lee Lake
- Mockingbird Reservoir

The beneficial uses of these surface water bodies include: municipal and domestic supply, agricultural supply, industrial service supply, industrial process supply, groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, and preservation of rare and endangered species. The ultimate goal of the DAMP is to protect the beneficial uses of the Receiving Waters from impacts related to Urban Runoff.

2.3.4.2 Municipal Separate Storm Sewer Systems

The MS4 facilities operated by the District in the SAR consist of an estimated 75 miles of underground storm drain and 59 miles of open channel. The MS4 facilities operated by the Co-Permittees include approximately 395 miles of underground storm drain and 65 miles open channel. Each year, the Permittees identify additions to their respective MS4 facilities to the District. These new facilities are then added to the updated MS4 maps that are included in the Annual Report to the Santa Ana Regional Board.

2.3.5 Current Water Quality Concerns and Issues

Urban Runoff discharged to MS4s in Riverside County ultimately flows to various surface water bodies (inland streams, lakes and reservoirs) and typically carries pollutants that originate from numerous dispersed and uncontrolled sources. Examples of pollutants that may be present in Urban Runoff are fertilizer, heavy metals, nutrients, petroleum products, sediment, bacteria, chemicals, and litter.

Because the SAR is large and has many land uses, the water quality concerns in sub-watersheds vary. However, each land use can potentially contribute pollutants to nearby streams, rivers, and lakes. The infrastructure that supports people's activities (e.g., roads, parks, MS4, and wastewater collection and treatment facilities) may contribute to water quality concerns if not properly managed. Other sources of storm water runoff, including agricultural areas, are exempt from the requirements of the NPDES permitting program established under the CWA. In addition, some pollutants, such as total suspended solids, may be found at elevated levels in runoff from non-urban land uses. Further, certain activities that generate pollutants present in Urban Runoff are beyond the ability of the Permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.[6]

Some Receiving Waters in the SAR (for example, Reaches 3 and 4 of the Santa Ana River, Cucamonga Creek, Mill Creek) are identified as impaired due to causes such as nutrients (nitrogen and/or phosphorus), pathogens (including coliform), sediment, and unknown toxicity. The 2006 303(d) List for

[6] Order No. 98-02 Fact Sheet, pgs. 5-6.

the area under the jurisdiction of the Santa Ana Regional Board can be viewed or downloaded from the following website: http://www.waterboards.ca.gov/tmdl/docs/303dlists2006/final/r8_final303dlist.pdf. The prior listing of Lake Elsinore as impaired by sediment does not appear in the 2006 303(d) List. A summary of the 2006 303(d) List for the SAR is presented in Table 2-1.

Table 2-1. 2006 303(d) List of Water Quality Limited Segments

Waterbody	Pollutants	Potential Sources
Canyon Lake (Railroad Canyon Reservoir)	Pathogens	Nonpoint Source
Chino Creek Reach 1	Nutrients	Agriculture; Dairies
Lake Elsinore	PCBs; Unknown Toxicity	Source Unknown; Unknown Nonpoint Source
Fulmor Lake	Pathogens	Unknown Nonpoint Source
Mill Creek (Prado Area)	Total Suspended Solids	Agriculture; Dairies
Santa Ana River Reach 4	Pathogens	Nonpoint Source

Additionally, the Santa Ana Regional Board has identified Receiving Waters that require additional monitoring to improve the quantity and/or quality of data used to develop the 303(d) List. Currently, some Receiving Waters within the SAR have been designated as needing additional monitoring data for parameters such as metals (aluminum, copper, silver, and zinc), salinity, chlorides, or total dissolved solids.

2.3.6 TMDLs

2.3.6.1 Lake Elsinore

According to the Lake Elsinore and Canyon Lake Nutrient Total Maximum Daily Loads staff report, prepared by the Santa Ana RWQCB (revised 5/21/04), Lake Elsinore and Canyon Lake are located at the terminus of the San Jacinto River watershed in southwestern Riverside County. The entire San Jacinto River watershed encompasses 780 square miles. Lake Elsinore is one of the few natural lakes in southern California. It was formed in a geologically active graben area and has been in existence over thousands of years. Due to the mediterranean climate and watershed hydrology, lake level fluctuations in Lake Elsinore have been extreme with periods of dry lake bed during some drought cycles. These drought cycles have a great impact on lake water quality.

Fish kills and excessive algae blooms have been reported in Lake Elsinore since the early 20th century. As a result, the Regional Board placed Lake Elsinore on the 1994 303(d) List of impaired waters due to excessive levels of nutrients. In December 2004 a nutrient TMDL[7] was established for Lake Elsinore and Canyon Lake. Storm Water and non-storm water discharges from septic systems, agriculture, dairy, urban, forested and open space lands, as well as in-lake sediments, have been identified as potential sources of impairment. More information on this TMDL is available in Section 13 of the DAMP.

[7] This TMDL can be viewed or downloaded from website: http://www.waterboards.ca.gov/santaana/html/elsinore_tmdl.html.

2.3.6.2 Canyon Lake

According to the Lake Elsinore and Canyon Lake Nutrient Total Maximum Daily Loads staff report, prepared by the Santa Ana RWQCB (revised 5/21/04), Canyon Lake, located approximately five miles upstream of Lake Elsinore, was formed by the construction of Railroad Canyon dam in 1928. Approximately 735 square miles of the 780 square mile San Jacinto River watershed drains to Canyon Lake. Only in wet years does Canyon Lake overflow to Lake Elsinore; during most years, runoff from the watershed terminates at Canyon Lake without reaching Lake Elsinore, resulting in the buildup of nutrients in Canyon Lake.

While Canyon Lake does not have as severe an eutrophication problem as does Lake Elsinore, the Regional Board believes there have been periods of algal blooms and occasional fish kills (anecdotal evidence, no written documentation). The Regional Board added Canyon Lake to the 1998 303(d) List of impaired waters due to eutrophication. Storm Water and non-storm water Discharges from septic systems, agriculture, dairy, urban, forested and open space lands have been identified as potential sources of impairment. In December 2004 a nutrient TMDL[8] was established for Lake Elsinore and Canyon Lake. More information on this TMDL is contained in Section 13 of the DAMP.

2.3.6.3 Santa Ana River, Reach 3 (Middle Santa Ana River)

According to Santa Ana Regional Board Resolution R8-2005-001, the Santa Ana River Reach 3 watershed covers approximately 488 square miles and lies largely in the southwest corner of San Bernardino County, and the northwestern corner of Riverside County. A small part of Los Angeles County (Pomona/Claremont area) is also included.

Several waterbodies within, and including the Middle Santa Ana River, have been listed for pathogen indicator impairments. These waterbodies include Middle Santa Ana River, Chino Creek Reaches 1 and 2, Mill Creek (Prado Area), Cucamonga Creek Reach 1, and Prado Park Lake. The Santa Ana Regional Board placed these waterbodies on the 1998 303(d) List of impaired waterbodies for pathogen indicators. In 2005, the Regional Board adopted a pathogen indicator TMDL for these same waterbodies. Potential sources of the impairment include storm water and non-storm water discharges from agricultural lands, dairy lands, urban lands, failed septic systems, open space areas, forested lands, and natural background sources. Recreational use of these waterbodies may also serve as a source of pathogens. More information on this TMDL is contained in Section 13 of the DAMP.

2.4 SANTA MARGARITA REGION WATERSHED BACKGROUND

The Santa Margarita watershed represents one of nine major California watershed systems between Santa Barbara and the U.S.-Mexico Border at Tijuana. The basin includes a watershed area of 746 square miles, ranking it as a moderately large system among coastal drainages. Physiographically, the basin is split into a mountainous highland (upper drainage basin) and broad, flat topped sea terrace (coastal drainage basin). The boundary between the upper drainage basin and the coastal drainage basin transitions at the County line between Riverside and San Diego Counties

[8] This TMDL can be viewed or downloaded from website: http://www.waterboards.ca.gov/santaana/html/elsinore_tmdl.html.

The upper Santa Margarita watershed includes two major basins, drained by Temecula and Murrieta Creeks. Over 50% of the Santa Margarita River watershed has been controlled by the construction of Vail Dam in 1949 and Skinner Reservoir in 1974, which created significant storage capacity in the upper watershed.[9] Due to this storage capacity, peak flow rates during major flow events for both existing and future land use conditions will be lower than under natural conditions (assuming average storage conditions in the reservoirs).[10]

Temecula Creek has a drainage area of 366 square miles, with steep rugged topography in the Palomar and Thomas Mountain areas and rolling hills below. The upper 316 square miles of this basin is controlled by Vail Lake (completed in 1949). Murrieta Creek has a drainage area of 222 square miles, with over 50 square miles controlled by Skinner Reservoir (completed in 1974). Although the watershed area is somewhat smaller and less rugged than the Temecula Basin, flood flows have the potential to create greater damage as they flow through the Cities of Temecula and Murrieta.

Temecula and Murrieta Creeks join along the Elsinore fault zone at the head of Temecula Canyon to form the Santa Margarita River. The Temecula Canyon is approximately five miles long, and is a steep, narrow, and rocky canyon. The San Diego-Riverside County Line crosses through the Temecula Canyon. From here, the river traverses 27 miles to the Pacific Ocean.[11]

2.4.1 Permit Area Land Use and Population Characteristics

The SMR is approximately 548 square miles, which is less than 8 percent of the 7,300 square miles within Riverside County. Only three of the 24 municipalities within Riverside County are under the jurisdiction of the San Diego Regional Board. The California Department of Finance estimates that as of January 1, 2004, the total population of Riverside County was about 1,776,700. Of the 1.78 million people, approximately 167,000 persons (approximately 10 percent) reside within the SMR. Approximately 12,900 persons reside in the unincorporated area while approximately 153,600 persons reside within the Cities of Murrieta and Temecula.

Based on Riverside County Assessor's Roll for Fiscal Year 2004 general land uses within the SMR are:

- 7.0 square miles used or zoned for commercial/industrial purposes (1.3 percent);
- 16.2 square miles zoned for urban residential (<1 acre) purposes (3.0 percent);
- 184.8 square miles zoned for rural residential (>1 acre) purposes (33.7 percent);
- 3.6 square miles zoned for parks and recreation facilities purposes (0.7 percent);
- 19.0 square miles zoned for improved roadways, including roadways owned by Caltrans (3.4 percent);

[9] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 14.

[10] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 20.

[11] Santa Margarita Watershed Study: Hydrologic and Watershed Processes, Phillips, Williams and Associates, Ltd., October 26, 1998, page 1.

- 96.0 square miles zoned vacant or utilized for open space (17.5 percent);
- 6.5 square miles without land use designation (1.2 percent); and
- 59.3 square miles zoned for agricultural purposes (10.8 percent).

Additionally, within the SMR, approximately 155.1 square miles are owned by the federal government (28 percent) and not under the control of the Permittees. Section 3.4.1 of the DAMP describes the limits of the Permittees' authority over discharges from federal, state and other lands. Although runoff from these areas may be discharged into the MS4 owned and operated by the Permittees, the Permittees do not have direct or indirect authority over these areas.

In 1956, only 0.3 percent of the SMR (less than two square miles) was urbanized.[12] Almost half a century later, even with a significant rate of growth in population relative to the State and neighboring counties, 94 percent of the SMR remains in non-urban land uses (rural residential, agriculture, preserves and open space, state lands, federal lands, and tribal lands). Further, almost one-third of the SMR consists of federal, state, and tribal lands[13] that are not under the jurisdiction of the Permittees' MS4 programs. It is projected that the population of Riverside County will increase approximately 22 percent by 2010 with slower growth occurring in the south county, down from 20% to 10%.[14] Assuming that the urbanized area increases proportional to population, 92 percent of the SMR would remain in non-urban land uses in 2010. Much of the remaining lands will ultimately be incorporated into the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP). The MSHCP requires the ongoing conservation of 500,000 acres within the County, a large portion of which are in the SMR.

2.4.2 Climate and Hydrology

The climate of the SMR is typically Mediterranean, being characterized by warm dry summers and cool rainy winters. About 75% of the precipitation occurs during the four-month period from December through March. Mean seasonal depth of precipitation ranges from less than 10 inches near Vail Reservoir to over 40 inches west of Palomar Observatory, varying with elevation and topographic influences.[15] Precipitation increases with increasing elevation to the summit of the Coastal range. Shading effects of the Coastal range lead to a marked decrease of precipitation throughout the lower portions of the Inland area. Precipitation increases again farther away from the Coastal range in the northeastern area of the Inland area.[16]

The upper drainage basin is formed almost solely by Murrieta Creek. Murrieta Creek is a major tributary of the greater 750 square mile Santa Margarita River watershed. This watershed consists of three major portions; the Murrieta Creek sub-watershed to the north, Temecula Creek subwatershed to the southeast, and Santa Margarita River to the southwest.

[12] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956.

[13] Riverside County Assessor Parcel Data, Close of Roll 2004.

[14] Southern California Association of Governments, May 2003.

[15] Ibid., pg. 11

[16] Ibid., pg. 38.

The watershed currently contains three major water storage reservoirs; Lake Skinner and the recently completed Diamond Valley Reservoir, which are part of the Murrieta Creek sub-watershed, and Vail Lake, which is part of the Temecula Creek sub-watershed. These reservoirs control over 50% of the Santa Margarita watershed. Runoff entering the reservoirs will be initially stored. Excess flows (depending on available storage volume) are discharged downstream. The combined reservoirs have a substantial storage capacity capable of significantly reducing downstream flows from the natural condition.

2.4.3 Physiography and Geology

Murrieta Creek flows between two lengthy strands of the Elsinore fault zone on land that has been down-dropped, relatively, by the faulting. Murrieta Creek flows southeasterly from the Wildomar area through the cities of Murrieta and Temecula to the confluence with Temecula Creek. It courses through the Elsinore trough at an average elevation of 1,100 feet above sea level. The lower 12.5 miles of Murrieta Creek drops in elevation 200 feet from an elevation of 1,200 feet. Physiographic features to the southwest include the Santa Rosa Plateau, and foothills of the Elsinore and Santa Ana Mountains which rise as much as 2,200 feet above Murrieta Creek. Land areas to the northeast of the creek consist of rolling hills and valleys which rise much less abruptly and are known as the "Perris block," a structural geologic feature that has been uplifted relative to the creek. Over the first 1.5 miles northeast of the creek, those rolling hills rise gradually to about 300 ft above the creek. Ultimately, they reach as much as 1,025 feet above the creek.[17]

Geologically, the Upper Santa Margarita watershed may originally have been a part of the Santa Ana River drainage system with the ancestral Temecula-Murrieta Creek flowing westward through Lake Elsinore. Over geologic time, the Santa Margarita River eroded the coastal mountain ridge headward sufficiently to "capture" the ancestral stream and eventually reverse the direction of Murrieta Creek.[18] These processes are continuing due to continued down-faulting and soils conditions, leading to significant natural erosion and sedimentation processes along the Santa Margarita River.

2.4.3.1 Surface Water

Murrieta and Temecula Creeks are perennial interrupted streams, that is, they include reaches in which the flow is continuous and others where flow is ephemeral. The areas of perennial flow are located in mountain area tributaries. The perennial flows disappear by seeping into the sands and gravels and resurfacing upstream of the confluence of Murrieta and Temecula Creeks. The creeks in the urbanized areas of the watershed, located primarily in the valley, are ephemeral and flows are observed only during and immediately after significant storm events. During major storms, after initial wetting, periods of intense rainfall result in rapid increases in streamflow in steep foothill and mountain areas.[19] Runoff in streams in the watershed is derived primarily from rainfall, and as a result, stream flow exhibits monthly and seasonal variations similar to those shown by the precipitation records. Absence of snow pack in the tributary watershed results in a rapid decrease in stream flow at the conclusion of the winter precipitation

[17] U.S. Army Corps of Engineers, Los Angeles District, Murrieta Creek Flood Control, Environmental Restoration and Recreation Final Feasibility Report, September 2000, pg. 25.
[18] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, pgs. 10 & 11.
[19] Riverside County Flood Control & Water Conservation District, "Hydrologic Data for 1975-76 Season," March 1982, pg. 49.

season. Following severe storms, discharge in the larger streams often increases in a few hours time from practically no flow to a rate of thousands of cubic feet per second. Stream flows vary greatly from month to month and from season to season.[20]

Rising groundwater is currently observed in Murrieta Creek below its confluence with the Santa Gertrudis Channel. This is consistent with the observations with the rising groundwater conditions observed by the State of California in 1956.[21] Rising groundwater is also observed in Temecula Creek approximately one-quarter mile upstream of the Interstate 15 bridge. In 1956, the State of California observed rising groundwater occurring as far upstream as the Highway 74 Bridge. Based on the virtual absence of non-storm water flows and the rising groundwater conditions in lower Murrieta and Temecula Creeks observed prior to development of the watershed, there is no evidence that the rising groundwater is due to Urban Runoff nor that Urban Runoff has affected the quality of rising groundwater. However, use and disposal of reclaimed water and agricultural and landscape irrigation in the watershed may affect groundwater quality. Until October 2002, the Rancho California Water District augmented the flow of the Santa Margarita River with reclaimed water at a point about five miles upstream from the Temecula gaging station. Since that time, the Rancho California Water District has discharged imported water downstream of the confluence of Murrieta and Temecula Creeks.

For the average annual event, it is estimated that approximately 89 percent of the volume of runoff in the SMR is due to non-urban land uses not regulated under the federal storm water program. For the 100-year 24-hour event, 93 percent of the volume of runoff will be due to non-urban land uses. These estimates are based on the assumption that precipitation is constant across the watershed. However, precipitation (and resultant runoff volumes) in the non-urbanized upland areas is as much as four times greater than that from the urbanized valley areas.[22]

[20] State of California Department of Public Works, Division of Water Resources, Bulletin No. 57, Santa Margarita River Investigation, Volume I, June 1956, pg. 48.
[21] Ibid.
[22] Ibid., pg. 11

2.4.4 Drainage Area Description

2.4.4.1 Surface Water Bodies

Approximately 8 percent of Riverside County drains into surface water bodies within the SMR. Those inland surface waters (or portions thereof) and their identified Beneficial Uses are:

Inland Surface Waters

Santa Margarita River (Hydrologic Unit Basin Number 2.22)
- Murrieta Creek
  - Slaughterhouse Canyon
- Cole Canyon
  - Warm Springs Creek
    - Diamond Valley Reservoir
- Santa Gertrudis Creek
  - Tucalota Creek
  - Lake Skinner
- Temecula Creek (Hydrologic Unit Basin Number 2.92)
  - Iron Spring Canyon
- Temecula Creek (Hydrologic Unit Basin Number 2.84)
  - Tule Creek
    - Million Dollar Canyon
  - Cottonwood Creek
- Vail Lake
  - Wilson Creek
    - Cahuilla Creek (Hydrologic Unit Basin Number 2.73)
      - Hamilton Creek
    - Cahuilla Creek (Hydrologic Unit Basin Number 2.71)
      - Elder Creek
  - Arroyo Seco Creek
  - Kolb Creek
- Temecula Creek (Hydrologic Unit Basin Number 2.52)
  - Pechanga Creek

Santa Margarita River (Hydrologic Unit Basin Number 2.21)
- DeLuz Creek

The Beneficial Uses of these inland surface water bodies include: municipal and domestic supply, agricultural supply, industrial service supply, industrial process supply, groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, and preservation of rare and endangered species.

2.4.4.2 Municipal Separate Storm Sewer System

The MS4 facilities operated by the Permittees in the SMR consist of an estimated 145 miles of major MS4 facilities (e.g., storm drains, channels, retention basins, etc.). A map of the MS4 facilities within the SMR is provided in Appendix D. Each SMR Permittee maintains a labeled map of their entire MS4 and the associated drainage areas. The SMR Permittees review their MS4 map on an annual basis and update their maps, as needed. The updated MS4 maps are then included in each Annual Report.

2.4.5 Current Water Quality Concerns and Issues

Urban Runoff discharged to MS4s in Riverside County ultimately flows to various surface water bodies (inland streams, lakes, and reservoirs) and typically carries pollutants that originate from numerous dispersed and uncontrolled sources. Examples of pollutants that may be present in Urban Runoff are fertilizer, heavy metals, nutrients, petroleum products, sediment, bacteria, chemicals, and litter.

Because the SMR is large and has many land uses, the water quality concerns in sub-watersheds vary. However, each land use can potentially contribute pollutants to nearby streams, rivers, and lakes. The infrastructure that supports people's activities (e.g., roads, parks, MS4, and wastewater collection and treatment facilities) may contribute to water quality concerns if not properly managed. Other sources of storm water runoff, including agricultural areas, are exempt from the requirements of the NPDES permitting program established under the CWA. In addition, some pollutants, such as total suspended solids, may be found at elevated levels in runoff from non-urban land uses. Further, certain activities that generate pollutants present in Urban Runoff are beyond the ability of the Permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography.

Some Receiving Waters in the SMR (for example, Murrieta Creek and the Upper Santa Margarita River) are identified as impaired due to phosphorus. The 2006 303(d) List for the area under the jurisdiction of the San Diego Regional Board can be viewed or downloaded from the following website: http://www.waterboards.ca.gov/tmdl/docs/303dlists2006/final/r9_final303dlist.pdf. However, the San Diego Regional Board has identified Receiving Waters that require additional monitoring to improve the quantity and/or quality of data used to develop the 303(d) List. Currently, some Receiving Waters within the SMR have been designated as needing additional monitoring data for parameters such as metals (iron, manganese), total dissolved solids, sediment, or sulfates. No TMDLs have been established for Receiving Waters in the SMR. A summary of the 2006 303(d) List for the SMR is presented in Table 2-2.

Table 2-2. 2006 303(d) List of Water Quality Limited Segments

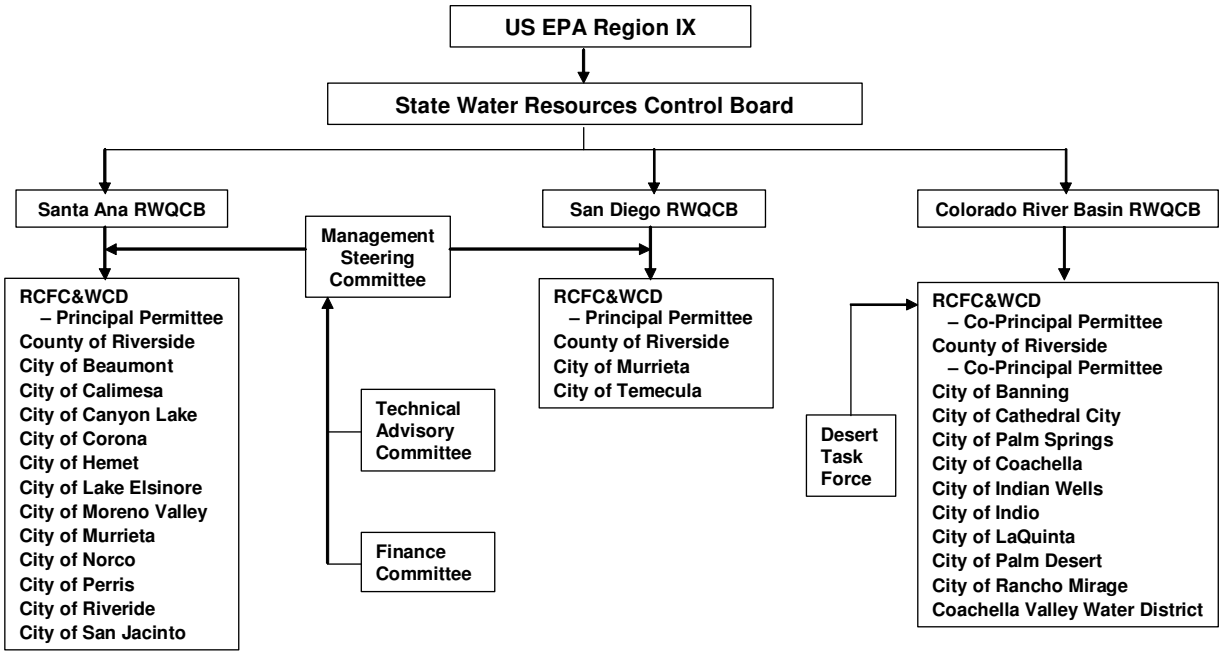
Waterbody	Pollutants	Potential Sources
Santa Margarita Lagoon	Eutrophic;	Nonpoint/Point Source
De Luz Creek	Iron Manganese	Source Unknown Source Unknown
Long Canyon	Total Dissolved Solids	Source Unknown;
Murrieta Creek	Iron Manganese Nitrogen Phosphorous	Source Unknown Source Unknown Source Unknown Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown Point Source
Rainbow Creek	Iron Sulfates Total Dissolved Solids	Source Unknown Source Unknown Source Unknown
Sandia Creek	Iron Manganese Nitrogen Sulfates Total Dissolved Solids	Source Unknown Source Unknown Source Unknown Source Unknown Urban Runoff/Storm Sewers Flow Regulation/Modification Natural Sources Unknown Nonpoint Source Unknown Point Source
Santa Margarita River (Upper)	Phosphorus;	Urban Runoff/Storm Sewers Unknown Nonpoint Source Unknown Point Source
Temecula Creek	Nitrogen Phosphorus Total Dissolved Solids	Source Unknown Source Unknown Source Unknown

3.0 PROGRAM MANAGEMENT

3.1 PRINCIPAL PERMITTEE AND PERMITTEE RESPONSIBILITIES

Riverside County is located within the jurisdictions of the Colorado River Basin, San Diego and Santa Ana Regional Boards, each of which has issued an MS4 Permit for the areas within their jurisdiction. Although each MS4 Permit is unique, they address the same program elements. The overall organization of the Riverside County Urban Runoff Management Program is described in Figure 3-1 and described further in the remainder of this subsection.

Figure 3-1. Organizational Chart Riverside County Municipal Storm Water NPDES Permits



RWQCB: Regional Water Quality Control Board
RCFC&WCD: Riverside County Flood Control & Water Conservation District

3.1.1 Implementation Agreements

3.1.1.1 Santa Ana Region

In November 1991 the District, Riverside County, and the cities of Beaumont, Corona, Hemet, Lake Elsinore, Moreno Valley, Norco, Perris, Riverside, and San Jacinto entered into a formal NPDES Storm Water Discharge Permit Implementation Agreement for the SAR. The purpose of the Implementation Agreement was to establish the responsibilities of the Principal Permittee and the Co-Permittees and to provide for funding of "umbrella" activities. The Implementation Agreement was subsequently amended to add the cities of Canyon Lake, Calimesa and Murrieta, address additional requirements of the subsequent versions of the MS4 Permit and establish the responsibilities of the Permittees as defined in the Third-term SAR MS4 Permit. The Third-term SAR MS4 Permit requires the Permittees to evaluate

the Implementation Agreement by November 30th of each year to determine the need, if any, for revision. The Annual Report must include the findings of this review and a schedule for any necessary revision(s).

Under the terms of the 2003 SAR Implementation Agreement (included as Appendix E, the Principal Permittee is required to:

- Comply with Section I.A (Responsibilities of the Principal Permittee) of the Third-term SAR MS4 Permit.
- Comply with Section II (Discharge Limitations/Prohibitions), Section III (Receiving Water Limitations), Section IV (Implementation Agreement), Section V (Legal Authority/ Enforcement), Section VI (Illicit Connections/Illegal Discharges; Litter, Debris and Trash Control), Section VII (Sewage Spills, Infiltration into MS4s from Leaking Sanitary Sewer Lines, Septic System Failures, and Portable Toilet Discharges), Section VIII (New Development, Including Significant Redevelopment), Section IX (Municipal Inspection Program), Section X (Education and Outreach), Section XI (Municipal Facilities Programs and Activities), Section XII (Municipal Construction Projects/Activities), Section XIII (Program Management/DAMP Review), Section XIV (Monitoring and Reporting Program), Section XV (Provisions) and Section XVI (Permit Expiration and Renewal) of the Third-term SAR MS4 Permit as they pertain to District facilities and operations.
- Perform all the sampling data collections and assessment requirements described in the Monitoring and Reporting Program of the Third-term SAR MS4 Permit. Specifically, the District prepares the required narrative for all reports and provides the SAR Co-Permittees an opportunity to review and comment on any such narrative.
- Perform all of the reporting requirements described in the Monitoring and Reporting Program of the Third-term SAR MS4 Permit. With respect to such reporting requirements, the District:
  a) Prepares the required narrative for such reports; and
  b) Provides the Co-Permittees an opportunity to review and comment on such narrative.

Also under terms of the 2003 SAR Implementation Agreement, each Permittee is required to:

- Comply with Section I.B (Responsibilities of the SAR Co-Permittees) of the Third-term MS4 Permit.
- Comply with Section II (Discharge Limitations/Prohibitions), Section III (Receiving Water Limitations), Section IV (Implementation Agreement), Section V (Legal Authority/ Enforcement), Section VI (Illicit Connections/Illegal Discharges; Litter, Debris and Trash Control), Section VII (Sewage Spills, Infiltration into MS4s from Leaking Sanitary Sewer Lines, Septic System Failures, and Portable Toilet Discharges), Section VIII (New Development, Including Significant Redevelopment), Section IX (Municipal Inspection Program), Section X (Education and Outreach), Section XI (Municipal Facilities Programs and Activities), Section XII (Municipal Construction Projects/Activities), Section XIII (Program Management/DAMP Review), Section XIV (Monitoring and Reporting Program), Section XV (Provisions) and Section XVI (Permit Expiration and Renewal) of the Third-term SAR MS4 Permit as they pertain to each Permittee's facilities and operations.

- Demonstrate compliance with all requirements of the Third-term SAR MS4 Permit through timely implementation of the approved DAMP and any approved modifications, revisions, or amendments.
- Provide the District all information needed to satisfy the reporting requirements described in the Monitoring and Reporting Program of the Third-term SAR MS4 Permit. Specifically, the Co-Permittees provide information on storm water facilities and/or other data when requested by the District; submit the requested individual information to the District no later than November 1 of each year, and provide the required information on District-approved forms.

In accordance with the 2003 SAR Implementation Agreement, in the event that the District requires the services of a consultant (or consultants) to prepare manuals, develop program components, or perform studies relevant to the SMR, the cost of the consultant services are shared by the District and the Co-Permittees. The shared costs are allocated as a 50% contribution from the District and a 50% contribution from the Co-Permittees. The percentage contribution from each of the Co-Permittees is a function of population. The 2003 SAR Implementation Agreement is updated as necessary to reflect evolving DAMP implementation needs.

3.1.1.2 Santa Margarita Region

Since 1991 the Permittees have coordinated implementation of the storm water compliance program through NPDES Storm Water Discharge Permit Implementation Agreement for the San Diego Region (SMR). The 2004 San Diego Region Implementation Agreement is provided in Appendix F.

Under the 2004 San Diego Region Implementation Agreement, the District (Principal Permittee) is required to:

- Comply with Provision M (Principal Permittee Responsibilities) of the Third-term SMR MS4 Permit, including providing the Co-Permittees an opportunity to review and comment on the Watershed Storm Water Management Plan (SWMP), Watershed SWMP Annual Report and any other reports prepared by the District on behalf of the Permittees.
- Comply with Provisions A through N (Prohibitions, Non-Storm Water Discharges, Receiving Water Limitations, Legal Authority, SWMP, Development Planning, Construction, Existing Development, Education, Illicit Discharge Detection and Elimination Program, Watershed-Based Activities, Monitoring and Reporting Program, and Standard Provisions, respectively) of the Third-term SMR MS4 Permit, as they pertain to District facilities and operations, at no cost to the Co-Permittees.
- Coordinate watershed efforts specified in Provision K.
- Conduct public education activities on a regional basis that focus on reducing pollution of Urban Runoff, including radio, print or other forms of advertising, developing brochures, and attending public events.
- Develop and implement mechanisms to determine the effectiveness of the regional public education program.

- Perform sampling of surface water and Urban Runoff in accordance with the provisions of the Monitoring and Reporting Program, Provision II.A of the Third-term SMR MS4 Permit. The Permittees have identified sampling locations, subject to approval by San Diego Regional Board.
- Contract with a water quality analytical laboratory to provide analysis of water quality samples collected for compliance with the Monitoring and Reporting Program.

Also under terms of the 2004 San Diego Region Implementation Agreement, each Co-Permittee is required to:

- Comply with Provisions A through N (Prohibitions, Non-Storm Water Discharges, Receiving Water Limitations, Legal Authority, SWMP, Development Planning, Construction, Existing Development, Education, Illicit Discharge Detection and Elimination Program, Watershed-Based Activities, Monitoring and Reporting Program, and Standard Provisions, respectively) of the Third-term SMR MS4 Permit, as they pertain to Co-Permittee facilities and operations.
- Enforce local ordinances and regulations within their respective jurisdictions to ensure compliance with the Third-term SMR MS4 Permit, including the exercise of land use controls and the exercise of police powers.
- Demonstrate compliance with the Third-term SMR MS4 Permit requirements through timely implementation of the approved Individual and Watershed SWMPs and any approved modifications, revisions or amendments thereto.
- Provide to the District (on District-provided forms) the information needed to satisfy the reporting requirements as described in the Provisions E, L, and K or to respond to information requests from the San Diego Regional Board. The Co-Permittees:
    a) Submit their Individual SWMPs and data necessary to prepare the Watershed SWMP and Receiving Waters Monitoring Reports no later than September 15 of each year.
    b) Provide information on existing MS4 facilities and/or other data as it pertains to Co-Permittee facilities when requested by District.
- Develop and implement public education programs targeted at individual communities or stakeholders within their respective jurisdictions.
- Comply with Provision II.B of the Monitoring and Reporting Program.

In accordance with the 2004 San Diego Region Implementation Agreement, the Permittees jointly provide funding for certain regional efforts that benefit the SMR, including but not limited to: County Environmental Health's Compliance Assistance Program; the County Fire Department's Hazardous Materials Team; County Environmental Health's Household Hazardous Waste (HHW) and Antifreeze, Batteries, Oil and Paint (ABOP) collection program; the District's membership with the California Stormwater Quality Association (CASQA) on behalf of Permittees; the District's administration of Principal Permittee duties, and other NPDES support activities as needed. Additionally, if the District requires the services of a consultant or consultants to assist in preparing manuals, developing programs or performing studies relevant to the entire SMR, the cost of the consultant services are shared by Permittees in accordance with the cost sharing provisions set forth in Section 3 of the 2004 San Diego Region

Implementation Agreement. The District notifies the Co-Permittees in writing of the District's request for proposals from consultants, selection of a consultant, consultant's fee, contract timetable, and payment schedule. The Co-Permittees the opportunity to participate in decisions related to consultant's services.

3.1.2 Management Steering Committee

The Permittees established the Management Steering Committee to address Urban Runoff management policies for the SAR and SMR and to review and approve revisions to the DAMP and the SAR and SMR Implementation Agreements. In addition, the Management Steering Committee facilitates coordination with related water quality management programs and monitoring and establishes positions relative to legislative and regulatory initiatives. The Management Steering Committee consists of city managers or equivalent representatives from each of the Co-Permittees and an executive-level representative from the County. The General Manager-Chief Engineer of the District participates on the Management Steering Committee as Chair. The District provides staff support to the Management Steering Committee. The Management Steering Committee meets quarterly or as determined by the Chair. The Third-term SAR MS4 Permit requires the designated representatives to attend three out of four Management Steering Committee meetings each year.

3.1.2.1 Finance Committee

In 2003, the Management Steering Committee recognized the need to evaluate long term funding solutions of Urban Runoff management programs and regional facilities and established the Finance Committee. The Finance Committee is appointed by the Management Steering Committee and consists of Permittee staff with expertise in public finance. The Finance Committee reviews financial issues and develops findings and provides recommendations to the Management Steering Committee.

3.1.2.2 Technical Committee and Work Groups

A Technical Committee has been established consisting of representatives formally appointed by the city manager or equivalent of each Permittee. The purpose of the Technical Committee is to direct the development of the DAMP and to coordinate the implementation of the overall MS4 Permit compliance program. The Technical Committee members also provide technical assistance and support to facilitate coordination with related water quality management programs and monitoring and to respond to legislative and regulatory initiatives. The District chairs and provides staff support to the Technical Committee. The Third-term SAR MS4 Permit requires designated members to attend eight out of ten Technical Committee meetings each year.

Work Groups have been established by the Technical Committee to oversee the development and implementation of the DAMP program components. The Work Groups include Permittee representatives and may also include industry representatives, representatives of environmental special interest groups, and other stakeholders as appropriate. A Permittee representative chairs each Work Group. Work Groups have been established to guide the following program components:

- Program Implementation / Public Education
- New Development/Redevelopment
- Construction

- Industrial and Commercial Facility Compliance
- Monitoring

3.2 INTERAGENCY AGREEMENTS AND COOPERATIVE ACTIVITIES

The District, in its role as Principal Permittee, administers or participates in several interagency programs in consultation with the SAR and SMR Co-Permittees. These programs generally at least benefit the SAR and/or SMR, but may also look at broader issues. Copies of the interagency agreements supporting these areas-wide programs are provided in Appendix G. These efforts may be expanded, reduced or abandoned over time based on budget, changing regulations, program needs, program effectiveness consideration, or other factors.

Those interagency programs under agreement as of May 2005 include:

- Storm Water Quality Task Force
- Storm Water Monitoring Coalition
- Hazardous Materials Emergency Response,
- Household Hazardous Waste Collection/ Antifreeze, Battery, Oil and Latex Paint (ABOP) Program,
- Santa Margarita River Executive Management Team
- Commercial/Industrial Compliance Assistance Program, and
- Various Public Education and Outreach Programs.

In addition, the District, in consultation with the Permittees, participates in several cooperative activities through informal or formal regional stakeholder workgroups. Stakeholders often include other public and private entities within the SAR or SMR. These efforts can broadly be categorized as watershed management efforts to address storm water quality issues within the SAR and/or SMR. These efforts may be expanded, reduced or abandoned over time based on budget, changing regulations, program needs, program effectiveness consideration, or other factors.

As of May 2005, the District and Permittees are participating in the following regional stakeholder efforts:

- Lake Elsinore / San Jacinto Watershed Authority
- San Jacinto Watershed Council
- Santa Ana Reach 3 Bacterial Indicator TMDL Workgroup
- Lake Elsinore/Canyon Lake Nutrient TMDL Stakeholder Workgroup
- Canyon Lake Bacterial Indicator TMDL Stakeholder Workgroup
- San Diego Proposition 13 Santa Margarita Watershed Project Team.

3.3 FUNDING SOURCES

The costs incurred by the Permittees in implementing the DAMP fall into two broad categories:

- **Shared Costs**. These are costs that fund activities performed mostly by the District under the Implementation Agreements. These activities include overall storm water program coordination; interagency agreements; representation at the CASQA, meetings of the Regional Boards or State Water Resources Control Board (State Board) and other public forums; preparation and submittal of compliance reports (including the DAMP) and other reports required under the Third-term MS4 Permits, Urban Runoff monitoring, Water Code Section 13267 requests, public education, CAP, budget and other program documentation; coordination of consultant studies, Permittee meetings, and training seminars.
- **Individual Permittee Costs for DAMP Implementation**. These are costs incurred by each Permittee for implementing within its jurisdiction the BMPs (drainage facility inspections for illicit connections, drainage facility maintenance, drain inlet/catch basin stenciling, emergency spill response, street sweeping, litter control, public education, construction activity inspection, development of implementation plans, etc.) comprising the DAMP.

Historically, the Permittees have employed four funding methods to finance their MS4 Permit compliance activities. Further, many Permittees utilize a combination of these funding sources. The different methods include:

- **Santa Ana and Santa Margarita Watershed Benefit Assessment Areas**. In 1991, the District established the Santa Ana and Santa Margarita Watershed Benefit Assessment Areas to fund its MS4 NPDES permit activities in the respective watersheds. Currently, the Benefit Assessment revenues fund both area-wide MS4 NPDES permit program activities and the District's compliance activities as a Permittee. In 2003/04 The Santa Ana Benefit Assessment generated approximately $1.7 million dollars in revenue, and the Santa Margarita Benefit Assessment generated approximately $345,000 dollars in revenue. Available fund balances allowed the Benefit Assessment fund to contribute approximately $2.6 million towards District NPDES compliance costs and regional NPDES program implementation. Revenue generated in a particular Benefit Assessment area must be spent only within that area.
- **County Service Area (CSA) 152**. In December 1991, the County of Riverside formed CSA 152 to provide funding for compliance activities associated with the SAR MS4 Permit. Under the laws that govern CSAs, sub-areas may be established within the overall CSA area with different assessment rates set within each sub-area. The cities of Corona, Lake Elsinore, Moreno Valley, Norco, Riverside, Murrieta and San Jacinto participate in CSA 152.
- **Utility Charge**. The City of Hemet funds a portion of its MS4 Permit compliance program activities through a utility charge
- **General Fund /Other Revenues**. The remaining Permittees (Beaumont, Calimesa, Canyon Lake, Hemet, Murrieta, Temecula and Perris) utilize general fund revenue to finance their MS4 Permit compliance activities. Other Permittees may also utilize general fund revenues to supplement financing of MS4 Permit compliance activities.

- **Fees**. Several Permittees charge fees for services such as inspections, plan check, and other recoverable costs relative to the Third-term MS4 Permits.

New funding sources or alternative combinations of funding sources may be required to ensure perpetual funding of Third-term MS4 Permit requirements. The Permittees continually review and modify their funding sources based on changing regulatory requirements, changing state and federal law, local municipal priorities and other considerations as necessary.

3.4 LEGAL AUTHORITY AND ENFORCEMENT

3.4.1 Legal Authority

Although other state and federal agencies, including the Regional Boards, may have overlapping legal authority over some discharges to and from MS4s (i.e., through the State's General Permits for storm water discharges associated with industrial facilities or construction activities), the Permittees must still independently establish, maintain and enforce adequate legal authority to control discharges to the MS4s (40 CFR §122.26(d)(2)(i)(A-F)). Conversely, the other state and federal agencies are independently responsible for enforcing their own legal authorities. Permittee legal authority can take the form of ordinances, statutes, permits, contracts or similar means, as necessary. At minimum, the Permittee's legal authority must:

- Prohibit Illegal Discharges (spills, dumping or disposal of materials other than storm water) to the MS4. Examples of Illegal Discharges include discharges of:
  - Sewage;
  - Wash water from cleaning or hosing of residential, municipal, industrial or commercial areas;
  - Runoff from material storage areas containing chemicals, fuels, grease, oil or other pollutants.
  - Pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
  - Sediment, pet waste, vegetation clippings, or other landscape or construction related wastes; and
  - Food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).

  It should be noted that some non-storm water discharges need not be prohibited. Section 4 of the DAMP provides additional information regarding these discharges.

- Prohibit and eliminate Illicit Connections to the MS4 as described in Section 4 of this DAMP;

- Control the contribution of pollutants to the MS4 through Urban Runoff associated with Development Projects[23], construction, industrial, residential and municipal activities within their jurisdiction as described in Sections 5, 6, 7, 8, and 9 of this DAMP;
- Require compliance with storm water ordinances, permits, contracts or orders;
- Authorize the Permittee to conduct the inspections, surveillance and monitoring necessary to determine compliance and noncompliance with local storm water ordinances, permits and the DAMP;
- Utilize enforcement mechanisms to require compliance with Permittee storm water ordinances, permits, contracts, or orders; and
- Control the contribution of pollutants associated with Urban Runoff through interagency agreements among Permittees.

Adequate legal authority is a prerequisite for Permittees to effectively implement compliance programs to reduce pollutants in discharges of Urban Runoff to the MEP. The legal authority necessary to implement compliance programs and pursue enforcement is provided to the Permittees through local storm water and erosion control ordinances. All Permittees (excluding the District[24]) have adopted a comprehensive storm water ordinance based on a model developed and adopted by the County of Riverside. The ordinances provide the Permittees with the legal authority to implement the requirements of the Third-term SAR MS4 Permit.

Santa Ana Region Specific Elements

The ordinances provide the Permittees with the legal authority to implement the requirements of the Third-term SAR MS4 Permit.

Santa Margarita Region Specific Requirements

Certification of adequate legal authority to comply with the Third-Term Santa Margarita MS4 Permit, signed by their chief legal counsel, is provided in the Individual Storm Water Management Plans. This includes certification that the Permittee's ordinances require implementation of the minimum BMPs designated by the Permittees for various activities and provides for the following sanctions or their equivalent: stop work authority, non-monetary penalties, fines, financial security, and/or permit denials for non-compliance.

The management and discharge controls addressed by the Permittees' local storm water and erosion control ordinances may be summarized as follows:

- The disposal of pollutants onto public or private land is prohibited;

[23] "Development Projects" refers to "Priority Projects" as defined in Section F.2.b.1 of the SMR MS4 Permit or "New Development and Significant Redevelopment" as defined in Section VIII.B.1 of the SAR MS4 Permit.

[24] The District already had the authority needed to implement the requirements of the enforcement/compliance programs and as such did not need to adopt the model storm water ordinance.

- Construction activities are required to comply with the local storm water ordinance and applicable erosion and sediment control ordinances;
- Development Projects[25] are required to implement BMPs to prevent deterioration of receiving water quality that could impair subsequent or competing beneficial uses of the water;
- Illicit connections to the MS4 are prohibited;
- Illegal Discharges (e.g., Non-storm water discharges), with the exception of discharges permitted by the Santa Ana or San Diego Regional Boards and those non-prohibited discharges identified in Section 4.1 of the DAMP, are prohibited. Illegal Discharges are defined in the Glossary (Appendix A).

The Permittees do not have legal authority over storm water discharges into their respective MS4s from agricultural activities, state and federal facilities, utilities and special districts, Native American tribal lands, wastewater management agencies and other point and non-point source discharges otherwise permitted by, or under the jurisdiction of, the Santa Ana or San Diego Regional Boards. Examples of non-point sources of pollutants not under the control of the Permittees include materials from operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear, residues from lawful application of pesticides, nutrient runoff from agricultural activities, and leaching of naturally occurring minerals from local geography. In the Third-term SAR MS4 Permit, the Santa Ana Regional Board recognizes that the Permittees should not be held responsible for such facilities and/or discharges. Similarly, certain activities that generate pollutants present in Urban Runoff are beyond the ability of the Permittees to eliminate.

Also, Permittees do not have the authority to enforce the provisions of California's General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit-Industrial) or California's General Permit for Storm Water Discharges Associated with Construction Activity (General Permit-Construction). The State Board issues these NPDES permits, and neither the State Board nor the Santa Ana or San Diego Regional Board has the authority under the CWA to delegate responsibility for administering these permit programs to the Permittees. However, local storm water and erosion control ordinances may address items similar to those identified in these statewide permits.

If the Permittee's Illicit Connection/Illegal Discharge (IC/ID) Detection and Elimination Program or Receiving Waters Monitoring Program identifies a non-jurisdictional discharge causing, or threatening to cause, a condition of pollution, contamination or nuisance (as defined in CWC Section 13050), in waters of the State, the following minimum guidelines will be followed:

1) The non-jurisdictional discharge will be documented.
2) When appropriate, samples of the non-jurisdictional discharge will be collected.
3) In emergency situations, the Hazardous Materials Emergency Response Team will be utilized and the Permittees will coordinate with the Office of Emergency Services and the applicable

[25] "Development Projects" refers to "Priority Projects" as defined in Section F.2.b.1 of the SMR MS4 Permit or "New Development and Significant Redevelopment" as defined in Section VIII.B.1 of the SAR MS4 Permit.

Regional Board to control the impact of the non-jurisdictional discharge on MS4s and Receiving Waters.

4) Notify the discharger verbally, at minimum, of their illegal discharge and the impact on MS4s and Receiving Waters and provide appropriate educational materials.

5) If necessary, notify the appropriate enforcement agency and/or the applicable Regional Board of the non-jurisdictional discharge causing, or threatening to cause, a condition of pollution, contamination or nuisance, in MS4s or Receiving Waters.

Santa Margarita Region Specific Elements

Where non-jurisdictional IC/Ids are identified, the Permittees will notify the responsible entity of the availability of technical assistance and provide guidance in seeking grants and other assistance to address the non-jurisdictional discharge. Also, the Permittees will, as appropriate, participate in watershed management efforts with other federal, state, regional and local agencies and other watershed stakeholders to address Urban Runoff issues within the watershed.

3.4.2 Enforcement/Compliance Strategy

As required under the Second-term SAR MS4 Permit, the Permittees developed an Enforcement/Compliance Strategy for ensuring that construction sites, commercial establishments, and industrial facilities operate in compliance with the local storm water and Urban Runoff ordinances and local erosion control ordinances. The goal of the Enforcement/Compliance Strategy was to document the enforcement of storm water ordinances fairly and consistently throughout the SAR. It is recognized that there is no clear, standard approach to handling all of the enforcement situations that may be encountered and that the judgment of each jurisdiction's staff will guide the appropriate level of response.

The Enforcement/Compliance Strategy has been integrated into the appropriate elements of this DAMP and those sections provide guidelines for Permittees in implementing enforcement actions appropriate for a given violation. Appendix H contains information regarding which Permittee departments are responsible for implementing the various aspects of the enforcement/compliance programs within its jurisdiction.

The Permittees have obtained all necessary legal authority to comply with the Third-term MS4 Permits through adoption of ordinances and/or municipal code modifications. As required by the Third-term MS4 Permits, the Permittees have reviewed their ordinances to verify that they include sanctions to ensure compliance. In addition, the Permittees have reviewed their litter/trash control ordinances to determine the need for revision to improve the effectiveness of these ordinances and their grading/erosion control ordinances in order to reduce erosion. Where needed, these ordinances have been revised.

3.4.2.1 Prioritize Violations

The local storm water and erosion control ordinances cover a wide range of prohibited activities with varying magnitudes of potential impact on the beneficial uses of Receiving Waters. For example, discharges of either hazardous materials (e.g., solvents and pesticides) or non-hazardous materials (e.g., food wastes, trash, and debris) into the MS4 are violations of storm water ordinances subject to enforcement. Similarly, an accidental spill into a catch basin inlet and an intentional discharge from an

illicit connection are both violations. Prioritizing violations is important in focusing local resources on those violations that may have the greatest potential impact on the quality of Receiving Waters.

It is not feasible to quantify the magnitude of violations of the storm water and erosion control ordinances. Instead, prioritizing violations is based on many factors, including the experience and professional judgment of the jurisdiction's staff. The factors that should be considered in prioritizing violations of local storm water and erosion control ordinances are presented in Table 3-1.

Table 3-1. Prioritization Factors for Violations

Prioritization Factor	Description
Characteristics of the potential pollutant	Based on chemical characteristics and potential to impact beneficial uses of receiving waters. The more toxic, hazardous, or detrimental to the beneficial uses of the receiving waters a pollutant is the higher priority the discharge.
Sensitivity of the affected receiving waters	The sensitivity of the affected receiving waters should be considered directly proportional to the priority of the violation because, for example, a more sensitive receiving water may suffer severe adverse effects from the discharge of a particular pollutant whereas a less sensitive receiving water may suffer no adverse effects from the same pollutant discharge. It is also important to consider that a receiving water may be highly sensitive to one potential pollutant discharge while, at the same time, completely insensitive to another potential pollutant. Examples of receiving waters that may be particularly sensitive include those with municipal supply or wildlife habitat designated beneficial uses.
Proximity of receiving waters	The closer a receiving water is to the discharge, the less chance there is for dispersion, dilution, or degradation of the potential pollutant. Therefore, the closer the discharge is to receiving waters, the higher priority of the violation.
Magnitude of discharge (volume and mass)	A larger illegal discharge should be of a higher priority than a smaller illegal discharge because as the magnitude of the pollutant discharge increases the extent of impact of the discharge on the environment increases as well.
Responsiveness of the discharger in taking corrective actions	A discharger who is responsive and implements a good faith effort to correct a violation is more likely to minimize adverse impacts to surface water quality than a discharger who takes no action to correct a violation. Therefore, the priority of a violation should decrease as the responsiveness of the discharger increases.
Intent of the discharger	Is the violation accidental or the result of an accident or a deliberate attempt to circumvent regulations?
Frequency of the violation	Violations of local storm water and erosion control ordinances that are continuous or reoccurring should be of a higher priority than isolated occurrences of violations. The more frequent a violation, the more likely it is that the discharge will impact surface water quality.
Previous history of non-compliance of the responsible party	A poor history of non-compliance of a discharger should result in a higher prioritization of subsequent violations as compared to a discharger with a good history of compliance because a history of non-compliance is evidence of a discharger's lack of concern for complying with local storm water and erosion control ordinances.

Table 3-2 has been developed to facilitate consistency in enforcement actions by the Permittees in the SAR and SMR. Table 3-2 provides general guidance for categorizing the severity of violations based upon the factors and/or circumstances associated with a violation. Table 3-2 also describes criteria for characterizing the severity of a violation as "high", "medium", or "low." For example, using Table 3-2, the accidental dumping of 20 gallons of trash several hundred yards away from an ephemeral stream would be considered a "low" priority violation. However, the intentional discharge of 2,000 gallons of pesticide directly into aquatic wildlife habitat would be a "high" priority violation.

In some cases, based on Permittee evaluation of circumstances, an individual violation may be categorized higher or lower than is indicated in Table 3.2. Violations may also not clearly fall into any single severity priority level described in Table 3-2. It is more likely that a violation would be characterized by factors representing more than one of the priority levels described in Table 3-2. In this case, a subjective evaluation of the violation would be required to select the priority level most representative of the characteristics and circumstances surrounding the violation.

Table 3-2. Severity of Violations

Factors Affecting the Severity of Violations	Severity Priority Level		
	High	Medium	Low
Pollutant Characteristics	Hazardous Materials (e.g., pesticides and solvents)	Metals, Nutrients, Sediment, other Non-Hazardous Materials	Trash and Debris
Sensitivity of Receiving Waters	Drinking Water Source, Wildlife Refuge, Illegal Discharges containing pollutants identified as impairing the receiving water.	Recreational reservoir, riparian habitat	Dry, ephemeral stream
Proximity of Receiving Waters	Adjacent	Several hundred feet away	Several hundred yards away
Discharge Magnitude	1000's Gallons	100's Gallons	10's Gallons
Responsiveness of Discharger	No action to contain or mitigate discharge	Reactive to control discharge when requested (i.e., cooperative)	Implements spill control plan at own initiative or shows good faith effort to respond
Intent of Violation	Intentional	Discharge due to lack of controls or negligence	Implemented and maintained controls that failed (i.e., accident)
Frequency of Violation	Continuous	Intermittent	Isolated incident
Previous History of Discharger	Enforcement and cleanup historically resisted and more than one previous violation	Enforcement and cleanup performed when threatened and one or less previous violations	Enforcement and cleanup performed when requested and no previous violations

3.4.2.2 Enforcement and Compliance Responses

The enforcement/compliance response should be based on the severity of the violation. The types of enforcement/compliance responses available, in typical order of increasing severity, are:

- Education and information,
- Verbal warning,
- Written warning,
- Notice of violation or non-compliance,
- Administrative compliance order,
- Stop work order or cease and desist order,

- Civil citation or injunction,
- Administrative fine, and
- Referral to the Environmental Crimes Strike Force for criminal prosecution (infraction or misdemeanor).

Administrative Remedies

Notice of Noncompliance. The Notice of Noncompliance constitutes a basic request that the property owner or facility operator rectify the condition causing or threatening to cause noncompliance with the storm water or erosion control ordinance. The Notice of Noncompliance is generally issued when one or more of the following circumstances exist:

- The violation or threat is not significant and has been short in duration,
- The responsible party is cooperative and has indicated a willingness to remedy the conditions,
- The violation or threat is an isolated incident, and
- The violation or threat does not affect and will not harm human health or the environment.

Administrative Compliance Orders. The Administrative Compliance Order is generally an appropriate enforcement tool in the following circumstances:

- An actual condition of noncompliance exists, but the condition cannot be remedied within a relatively short period of time.
- The owner of the property or facility operator has indicated willingness to come into compliance by meeting milestones established in a reasonable schedule.
- The violation does not pose an immediate threat to human health or the environment.

Stop Work Order or Cease and Desist Order. The Stop Work Order or Cease and Desist Order are appropriate when the immediate action of the owner of property or operator of a facility is necessary to stop an existing discharge, which is occurring in violation of an ordinance. The Cease and Desist Order may also be appropriately issued as a first step in ordering the removal of nuisance conditions, which threaten to cause an unauthorized discharge of pollutants if exposed to rain or surface water runoff. The Cease and Desist Order is generally issued when one or more of the following circumstances exist:

- The violation or threat is immediate in nature and may require an emergency spill response or immediate nuisance abatement if left unattended.
- The violation or threat exhibits a potential situation that may harm human health or the environment.
- Contacts with the property owner or facility operator indicate that further authority of the Permittee may need to be demonstrated before remedial action is forthcoming.
- Prior Notices of Noncompliance have not obtained a favorable response.

Prior to issuance of any Administrative Compliance Order, Cease and Desist Order or commencement of other civil or criminal enforcement action against any person, the Permittee should deliver to the person a written Notice of Noncompliance, which states the act or acts constituting the violation and directs that the violation be corrected. The Notice of Noncompliance should provide the person with a reasonable time period to correct the violation before further proceedings are brought against the person. However, a Notice of Noncompliance should not be the first enforcement method used if egregious or unusual circumstances indicate that a stronger enforcement method is appropriate.

Criminal Enforcement

Misdemeanors. Criminal enforcement is appropriate when evidence of noncompliance indicates that the violator of the Ordinance has acted willfully with intent to cause, allow continuing or concealing a discharge in violation of the Ordinance.

Infractions. At the discretion of the Permittees' attorneys, misdemeanor acts may be treated as infractions. Factors that the attorney may use in determining whether the misdemeanor is more appropriately treated as an infraction may include the:

- Duration of the violation or threatened violation.
- Compliance history of the person, business or entity.
- Effort made to comply with an established compliance schedule.
- Existence of prior enforcement actions.
- Actual harm to human health or the environment from the violation.

Issuance of Citation. Where criminal enforcement is indicated, the inspector will issue a citation including the:

- Name and address of the violator,
- Provisions of the Ordinance violated,
- Time and place of required appearance before a magistrate.

The offending party must sign the citation thereby promising to appear. If the cited party refuses to sign the citation, the inspector may cause the arrest of the discharger, or may refer the matter to the municipal attorney for issuance of a warrant for arrest. Inspectors should be aware that cited parties have the right to demand the immediate review by a magistrate, and such a request must be granted. Inspectors should respond to such a request by referring the request to the Permittee's police department.

Referral to Environmental Crimes Strike Force

The Riverside County Environmental Crimes Strike Force is a committee designed to pursue enforcement of serious environmental crimes. Referral of a case to the Environmental Crimes Strike Force would occur after repeated attempts at obtaining compliance have failed.

Appropriate Enforcement/Compliance Responses

Permittees will emphasize and encourage voluntary compliance with storm water and erosion control ordinances to the maximum extent practicable. However, if routine inspections or dry weather monitoring indicate illicit connections or illegal discharges, they will be investigated and eliminated or permitted[26] as soon as possible, but no later than sixty (60) calendar days of receipt of notice by its staff or from a third party. Illicit discharges that are a serious threat to public health or the environment will be eliminated immediately.

Table 3-3 provides an example of appropriate enforcement responses that correspond to the severity priority level of a violation of a Permittees ordinances or other storm water laws, regulations or contracts as determined from Table 3-2. Permittees and the respective Regional Board should work cooperatively in implementing enforcement/compliance responses according to their respective authorities. State law limits the authority of Permittees to assess fines and penalties. However, the Regional Boards have substantial abilities to assess fines and penalties under State and federal law that can be used to augment local enforcement where superior regulatory authority and the ability to assess fines and penalties would be beneficial.

Table 3-3. Enforcement Responses for Violations Where Overlapping Authority Exists

Incident Severity Priority Level	Appropriate Enforcement Responses[1]	Lead Enforcement Agency	
		Permittee	Regional Board Support
High	Referral to Environmental Crimes Strike Force	X	X
	Citation	X	X
	Infraction	X	X
	Misdemeanor	X	X
Medium	Infraction	X	X
	Misdemeanor	X	X
	Stop work order or cease and desist order	X	
	Administrative compliance order	X	
	Notice of non-compliance	X	
Low	Administrative compliance order	X	
	Notice of non-compliance	X	
	Written warning	X	
	Verbal warning	X	
	Education and information	X	

[1] Education and information should be incorporated into all enforcement responses.

Table 3-3 also provides an example of how coordinated responses in areas of overlapping authority should occur, unless there is justification for implementing alternate actions. In general, the respective Regional Board may be asked to provide support in enforcement actions related to incidents that are or

[26] Unauthorized non-storm water discharges to surface waters and a MS4 must be permitted through the applicable Regional Board.

escalate to a high-priority status. The Permittees take the lead in initiating enforcement actions related to medium and low priority incidents. Finally, the respective Regional Board will take all enforcement actions related to compliance with the State General Permits.

Coordination of Enforcement/Compliance Activities with Other Permittees

Coordination with other Permittees and government agencies including the Santa Ana and San Diego Regional Boards is essential for successful implementation of an enforcement/compliance program. The entire MS4 is not controlled by a single Permittee, nor does any single Permittee have authority to take enforcement action for violations occurring outside of its jurisdiction. Further, other governmental agencies may have additional enforcement authorities that are appropriate to the situation. Each Permittee coordinates its enforcement activities, as practicable, with the appropriate Permittees and agencies in accordance with the following guidelines:

- Enforcement will be coordinated when multiple agencies have jurisdiction and an agency has not been able to obtain compliance by the discharger.
- Unless otherwise agreed to in writing, the lead enforcement agency role will be assigned on the basis of the origin of the discharge.
- The Regional Board may be asked to be the lead enforcement agency for higher priority illegal discharges in areas of overlapping authority and will be lead enforcement agency for all enforcement actions related to compliance with the State General Permits.
- Investigation and other relevant information will be shared between the participating agencies in a timely fashion.

Lead Enforcement Agency Responsibilities. The lead enforcement agency will assume the following responsibilities:

- Coordinating activities and assigning responsibilities (e.g., investigations, site visits, etc.) among participating agencies;
- Maintaining communication and information exchange among participating agencies; and
- Ensuring that follow-up actions are implemented.

Enforcement Activities Directory. A list of contact names identifying who should be contacted to coordinate enforcement activities for each Permittee, as well as the Regional Board and other potentially interested agencies is maintained by the District and distributed to the Permittees and others as appropriate to facilitate coordination of enforcement activities.

Coordination with the Regional Board

Under the Porter-Cologne Water Quality Act, the State has provided the Regional Boards with overriding authority to manage water quality and administer compliance with state and federal water quality law. This authority includes the ability to impose more significant fines and other sanctions than the Permittees. With this authority, the Regional Board may be more effective in obtaining the cooperation and compliance from those who violate storm water ordinances or regulations. The appropriate Regional

Boards are notified by the Permittees when findings of potential non-compliance with the State's General Storm Water Permits or the San Jacinto Watershed Construction Activities Permit have been identified or when Permittees have been unable to obtain the compliance of a party responsible for violating local storm water or erosion control ordinances. The list of contact names maintained by the District identifies the appropriate Regional Board staff to contact to initiate coordination of enforcement activities or to notify the Regional Board of potential findings of non-compliance. Where appropriate, notifications of potential non-compliance should be forwarded to the designated Regional Board contact person by the Permittee's storm water compliance coordinator.

Coordination with Other Agencies

In addition to the Regional Board, Permittees may also find it useful or necessary to coordinate or report findings of potential non-compliance to other government agencies with jurisdiction over water quality issues including the California Department of Fish and Game and the United States Fish and Wildlife Service. The list of contact names maintained by the District identifies the appropriate staff at these agencies to contact to initiate coordination of enforcement activities or to notify of potential findings of non-compliance.

3.4.2.3 Recordkeeping and Reporting

Minimum Guidelines for Recordkeeping

Information to be retained by the Permittees regarding their enforcement program includes:

- Documentation of staff training;
- Inspection notes or reports;
- Warning letters, violation notices, etc.;
- Documentation of follow-up actions;
- Contact reports from meetings or conversations with violators, Permittees, or other agencies; and
- Copies of notifications of potential non-compliance.

Annual Summary of Enforcement Actions

Each Permittee completes an annual summary of enforcement actions to document implementation of their enforcement and compliance programs. The summaries document the responsible party, address, type of facility, description of violation, date of initial violation, and enforcement/compliance actions implemented for violations identified by a Permittee. The Third-term MS4 Permits do not specify a minimum period for record retention; however, consistent with requirements specified in the General Permit-Industrial, the Permittees maintain compliance records for a minimum of five years.

3.4.3 Training for Enforcement

Training is necessary for successfully implementing the Permittee's enforcement/compliance programs so that staff can continue to recognize and respond to violations in an appropriate manner. Therefore, staff involved in implementing a Permittee's enforcement/compliance program are made aware of the local, state, and federal storm water regulations and the procedures developed to enforce these regulations.

Permittees provide storm water training to staff that are involved in inspections of industrial facilities and construction sites, enforcement of storm water and erosion control ordinances, administration of the enforcement/compliance program, and other staff as appropriate.

Staff training addresses the following areas:

- Requirements of the local storm water and erosion control ordinances;
- Requirements of the Third-term MS4 Permits and DAMP;
- Requirements of the General Permit- Industrial and General Permit- Construction;
- Requirements of the San Jacinto Watershed Construction Activities Permit, where applicable; and
- Requirements of the Enforcement/Compliance Strategy.

Industrial facility and construction site inspectors also receive training regarding storm water pollution prevention plans (SWPPPs) for construction sites, and selection of appropriate BMPs for industrial facilities and construction sites. Knowledge of the applicable requirements and the overall storm water program helps inspectors and other staff to recognize potential violations, respond with appropriate levels of enforcement, and effectively coordinate with other agencies. The Permittees individually maintain a log of trained staff and report training and this information is summarized in the Annual Reports.

4.0 ELIMINATION OF ILLICIT CONNECTIONS AND ILLEGAL DISCHARGES

4.1 DISCHARGE LIMITATIONS AND PROHIBITIONS

The Third-term MS4 Permits require the Permittees to comply with the following in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted there under, and the provisions of the CWA, as amended and the regulations and guidelines adopted there under:

- Under §122.26(d)(2)(i)(F) of the CWA, the Permittees must continue to prohibit illicit connections and illegal discharges (non-storm water) from entering their MS4.
- The discharge of Urban Runoff from each Permittee's MS4 facilities to the Waters of the U. S. containing pollutants that have not been reduced to the MEP is prohibited.
- Discharges from the MS4 that cause or contribute to exceedances of Receiving Water Quality Standards for surface or groundwater are prohibited.
- The Permittees must continue to effectively prohibit the discharge of non-storm water into their respective MS4s and to the Waters of the U. S. unless such discharge is authorized by a separate NPDES permit or specifically allowed by the following provisions. The Permittees are not required to prohibit the discharges identified below. If, however, any of the following allowable non-storm water discharges are identified by either a Permittee or the Executive Officer as a significant source of pollutants, coverage under Santa Ana Regional Board Order No. R8-2003-0061, NPDES No. CAG998001[27] (General Permit-De Minimus Discharges) s amended by Order Nos. R8-2006-0004 and R8-2005-0041, or other NPDES Permit or waste discharge requirements, may be required.

    1. Discharges covered by a NPDES permit, Waste Discharge Requirements, or waivers issued by the Regional Board or State Board. Unless a Permittee is the discharger, the Permittees are not responsible for any exceedances of Receiving Water Limitations associated with such discharges;
    2. Discharges from potable water line flushing and other potable water sources;
    3. Discharges from landscape irrigation, lawn/garden watering and other irrigation waters;
    4. Air conditioning condensate;
    5. Diverted stream flows;
    6. Rising ground waters and natural springs;
    7. Groundwater infiltration (as defined in 40 CFR 35.2005(20)) and uncontaminated pumped groundwater[28];
    8. Passive foundation drains;

[27] General Waste Discharge Requirements for Discharges to Surface Waters Which Pose an Insignificant (De Minimus) Threat to Water Quality Order No. R8-2003-0061, NPDES No. CAG998001.

9. Passive footing drains;
10. Water from crawl space pumps;
11. Flows from riparian habitats and wetlands;
12. Dechlorinated swimming pool discharges;
13. Waters not otherwise containing wastes as defined in Water Code Section 13050 (d); and
14. Other types of discharges identified and recommended by the Permittees and approved by the Regional Board.

- The Regional Board may issue Waste Discharge Requirements for discharges exempted from NPDES requirements, such as agricultural irrigation waters, if identified to be a significant source of pollutants.
- The Regional Board may amend the Third Term MS4 Permit to add categories of allowable non-storm water discharges based on a finding that they are not significant sources of pollutants; or remove categories of allowable non-storm water discharges listed above, based upon a finding that the discharges are a significant source of pollutants.

Santa Ana Region Specific Elements

- Emergency water flows (i.e., flows necessary for the protection of life and property) do not require BMPs and need not be prohibited. However, appropriate BMPs must be considered where practicable when not interfering with emergency public health and safety issues;
- When allowable non-Urban Runoff discharges are identified as a significant source of pollutants to the Waters of the U.S., a Permittee must either: prohibit the discharge category from entering its MS4 or ensure that Structural BMPs and Source Control BMPs are implemented to reduce or eliminate pollutants resulting from the discharge. The Permittees must evaluate the allowed non-Urban Runoff discharges, as listed above, and notify the Executive Officer if any are a significant source of pollutants to their MS4s.
- The discharge of pollutants, including trash and debris, from the MS4 to Receiving Waters must continue to be reduced to the MEP.
- MS4 discharges in the Santa Ana Region must be in compliance with the discharge prohibitions contained in Chapter 5 of the Santa Ana Region Basin Plan.
- Discharge of Urban Runoff from the MS4 cannot cause or contribute to a condition of nuisance as the term is defined in Section 13050 of the Water Code.

Santa Margarita Region Specific Elements

- Discharges into and from the MS4 in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance (as defined in CWC Section 13050), in Waters of the State are prohibited.

[28] Groundwater that meets the surface water quality objectives of the receiving water to which it will be discharged as specified in the Basin Plan.

- Discharges from the MS4s are subject to the Basin Plan Prohibitions cited in Attachment A to San Diego Region Board Order R9-2004-001 (Appendix C).
- Non-emergency fire fighting flows need not be prohibited.
- If emergency fire fighting activities are determined to be a significant source of pollutants to Waters of the United States, the Permittees will require the implementation of appropriate BMPs to reduce the discharge of pollutants to the MEP, when not interfering with the protection of health and property.
- Non-commercial vehicle washing, [e.g., residential car washing (excluding engine degreasing) and car washing fundraisers by non-profit organization] need not be prohibited;
- If allowable non-storm water discharge categories are found by the Permittees or the San Diego Regional Board to be a source of pollutants to Waters of the United States, the Permittees either prohibit the discharge category or develop and implement appropriate control measures under the DAMP to reduce pollutants to the MEP and submit the report to the San Diego Regional Board pursuant to Section III.A.1.d of Monitoring and Reporting Program No. R9-2004-001 (Appendix C).

4.2 PERSISTENT EXCEEDANCES OF WATER QUALITY STANDARDS

If the Permittees determine an exceedance of Water Quality Standards due to Urban Runoff discharges persists, notwithstanding the implementation of the DAMP and other requirements of the Third-term MS4 Permits, the Permittees will:

Santa Ana Region Specific

Implement the Procedure described in Section III.D of the Third-term SAR MS4 Permit.

Santa Margarita Region Specific

Implement the procedure described in Provision C.2 of the Third-term SMR MS4 Permit.

So long as the Permittees have complied with the procedures set forth above and are implementing the revised DAMP, the Permittees do not have to repeat the same procedure for continuing or recurring exceedances of the same Water Quality Standards unless the Executive Officer determines it is necessary to develop additional BMPs and provides written notice to the Permittees of this determination.

4.3 DETECTION AND ELIMINATION OF ILLICIT CONNECTIONS

The Permittees have programs in place to identify and eliminate illicit connections. Some of the Permittees conduct this aspect of their MS4 Permit compliance program as a part of the routine maintenance of their MS4 facilities. The Permittees have also surveyed their MS4 facilities to identify illicit connections. In the mid-1990s, reconnaissance surveys were conducted to identify illicit and illegal discharges to the MS4. The reconnaissance surveys were limited to underground storm drains of 36-inch diameter or larger and open channels and most Permittees utilized video taping. Each undocumented connection to the MS4 was traced to its origin. Although 200 undocumented connections to the underground MS4 facilities were found, none of the connections were determined to be illegal

connections with regard to the MS4 NPDES program. As underground facilities are difficult to access and the Permittees inspect the construction of new underground MS4 facilities to verify that no illicit connections are being made, it has been determined that additional inspections of the underground MS4 facilities are not warranted. However, inspections of open channel facilities to identify illicit connections are conducted as an element of routine facility maintenance. Illicit connections identified during these surveys are documented and removed where necessary in order to comply with the MS4 Permit requirements.

The Permittees actively seek to eliminate and prohibit illicit connections and illegal discharges to the MS4. In addition, the Permittees implement and improve routine inspection and monitoring and reporting programs for their MS4. If routine inspections or dry weather monitoring indicate illicit connections or illegal discharges, they are investigated and eliminated or permitted[29] as soon as possible, but no later than sixty (60) calendar days of receipt of notice by Permittee staff or from a third party. However, illicit discharges that are a serious threat to public health or the environment are eliminated immediately.

Santa Margarita Region Specific Element

The SMR Permittees implement a program to actively seek and eliminate illicit discharges and connections to their respective MS4s as described in the Individual SWMPs. Each SMR Permittee maintains a labeled map of their entire MS4 and the associated drainage areas. The SMR Permittees review their MS4 map on an annual basis and update their maps, as needed. Each SMR Permittee implements an Illicit Discharge Monitoring Program, which is described in their Individual SWMP. The Illicit Discharge Monitoring Programs include numeric criteria that are used to determine when laboratory analytical results indicate that a follow-up investigation is warranted.

4.4 ILLEGAL DISCHARGES RESPONSE AND REPORTING

The Permittees have programs in place to respond to illegal discharges. Predominantly, illegal discharges are reported by the public or by Permittee field personnel. Appropriate Permittee field personnel are trained to identify potential illicit connections and illegal discharges during the course of their normal duties. Illicit connections and illegal discharges may also be determined from complaint calls from the public. For example, the District currently operates, on behalf of the Permittees, a centralized 24-hour hotline (1-800-506-2556) that may be used by the public to, among other things, report illegal dumping from urban areas into public streets, the MS4 and other waterbodies. These calls can be received in English or Spanish and are routed to the appropriate Permittee departments or contacts. The Permittees also implement wet and dry weather monitoring programs that may indicate the presence of illicit connections or illegal discharges.

To assist in response to complaint calls, and as part of the area-wide program on behalf of the Permittees, the District continues to provide financial support to the County's Hazardous Materials Emergency Response Team to ensure that hazardous materials from spills or illegal dumping have minimal impact on

[29] Unauthorized non-storm water discharges to surface waters and a MS4 must be permitted through the applicable Regional Board.

MS4s and receiving waters. Each Permittee also has code enforcement or other trained staff who are assigned the responsibility to respond to illegal discharges or illicit connections. In addition, as a proactive deterrent to potential illegal discharges, the District, on behalf of the Permittees, also provides funding to support the County Department of Environmental Health's Household Hazardous Waste collection program. This facilitates the proper management and disposal of used oil, toxic materials and other household hazardous wastes.

Response

When put on notice by staff or a third party of a potential illicit connection or illegal discharge that is not being responded to by another responsible agency (e.g., other Permittee, sewering agency, fire department, etc.), the Permittee shall immediately determine if it is a threat to human health or the environment. Any sewage spill over 1,000 gallons or that could impact water contact recreation, any spill that could impact wildlife, any hazardous material spill where residents or evacuated, any spill of reportable quantities of hazardous waste (as defined by 40 CFR 117 and 40 CFR 302), or any other spill reportable to the OES is classified as a threat to human health or the environment. Based on the Permittee's initial assessment, the Permittee with jurisdiction over the affected MS4 facility will take the following actions:

Illicit Connections and Illegal Discharges that are Threats to Human Health and the Environment

- Follow reporting procedures specified below.
- Immediately investigate and remediate the situation and/or coordinate with the appropriate response agencies to remediate the situation
- Lead or coordinate with other agencies regarding appropriate enforcement against the discharger per the guidelines of Section 3.4.

Non-Threatening Illicit Connections and Illegal Discharges

Permittees meet the following minimum guidelines when responding to reports of non-threatening illegal discharges:

- If the reported incident is outside of a Permittee's jurisdiction, referral to the appropriate agency and/or the respective Regional Board will be made within two (2) business days;
- Permittees respond to reports of illicit connections or illegal discharges within their jurisdiction within ten (10) business days;
- Inspections performed in response to a report are documented appropriately; and
- When appropriate, samples of illegal discharges are collected.

Reporting

The Permittees with jurisdiction over the portion of the MS4 affected by the illegal discharge, upon being notified, shall immediately investigate the circumstances of potential illegal discharges and/or illicit connections to their MS4 to determine if the potential discharge is a threat to human health or the

environment as defined above. Based upon their assessment and as specified below, the Permittees report all discharges that endanger human health or the environment:

1. By phone to the Office of Emergency Services (the "OES") at (800-852-7550) and to the Executive Officer [Santa Ana: (951) 782-3238; San Diego: (619) 467-2952]. Alternatively, the report to the Executive Officer may be provided by e-mail at sw@waterboards.ca.gov
2. At a minimum, any sewage spill above 1,000 gallons or that could impact water contact recreation, any oil spill that could impact wildlife, any hazardous material spill where residents are evacuated, any spill of reportable quantities of hazardous waste (as defined in 40CFR 117 and 40 CFR 302), or any other spill or discharge that is reportable to the OES (collectively, an "Emergency Situation") is reported within twenty-four (24) hours of the Permittee(s) becoming aware of the circumstances.
3. All other spill incidents, including any unauthorized discharges that are not reportable to the OES are reported to the Regional Board via each Permittees Annual Report.

4.5 ENFORCEMENT FOR ILLICIT CONNECTIONS AND ILLEGAL DISCHARGES

Investigations are performed by each Permittee in response to reports of illicit connections or illegal discharges received from the public, Permittee staff or other agencies within their jurisdictions. The sources of these discharges may include residential, commercial, industrial and construction activities and other sources. As described in Section 3.4, the Co-Permittee's have adopted ordinances prohibiting such discharges and established programs to enforce them.

Construction site inspectors, industrial and commercial facility inspectors, and other Permittee departments, including fire and wastewater inspectors, will report potential illicit connections and illegal discharges discovered during the course of existing routine inspections to the appropriate Regional Board if they are perceived to be in violation of the General Permits. In addition, although construction site and industrial/commercial site violations may be enforced initially through local storm water and erosion control ordinances, referrals are made to the Regional Board if compliance is not achieved. In all cases, the notification of potential non-compliance should be routed through the Permittee's storm water compliance coordinator before notifying Regional Board staff.

4.6 LITTER CONTROL

The Permittees implement control measures to reduce and/or to eliminate the discharge of pollutants, including trash and debris, from the MS4 to the Receiving Waters. In the SAR, these control measures are reported in the Annual Report. Typical litter control activities may include public education, street sweeping, code enforcement activities targeted at illegal dumping, watershed cleanup events and/or other activities implemented by the Permittees collectively or individually.

4.7 SANITARY WASTES

The Executive Officer of the Santa Ana Regional Board requested the local sewering agencies to take the lead in the development of a unified response to sewage spills that may have an impact on Receiving Water quality. This procedure includes notification of all sewage spills from private laterals and failing

septic systems into the MS4 and coordination of sewage spill prevention, containment and response activities though appropriate departments, programs and agencies. The District collaborated with the local sewering agencies in the development of this procedure, a copy of which is included as Appendix I. However, the response procedure is implemented in both the SAR and the SMR. The Permittees provide local sanitation districts 24-hour access to the MS4s to address sewage spills. The Permittees work cooperatively with the local sewering agencies to determine and control the impact of infiltration from leaking sanitary sewer systems on Urban Runoff quality.

The County Health Department regulates septic tanks and portable toilets under Ordinance No. 712. This ordinance requires sanitary waste haulers to inform residential septic tank pumping customers in writing of:

- The number of compartments within the system to be pumped;
- An assessment of tank condition as to necessity for pumping chambers, in addition to the primary chamber. For routine maintenance, all compartments of a septic tank should be made available for pumping of liquid and solids;
- The number of compartments actually pumped;
- The number of gallons removed;
- The pH value of the load.

In cooperation with the County Health Department, the Permittees have identified procedures to control septic system failures to prevent impacts on Urban Runoff quality and continue to follow procedures established by the State Health Department to address such failures. The County also implements regulations adopted by the State Board pursuant to California Water Code Section 13290-13291.7 through a memorandum of understanding with the Regional Board. The design review of septic systems is performed by Memorandums of Understanding with the Regional Boards. Statewide standards for construction are being developed by the State Board, in conjunction with other stakeholders, under the provisions of AB 885 of 2000. It is expected that the final regulations implementing AB885 will include provisions for ongoing, regular monitoring of some or all septic systems.

In addition, Ordinance No. 650 establishes the construction requirements for septic systems, and, in conjunction with the California Health and Safety Code sections 5411 and 5461 establishes the authority and responsibility of the Department of Environmental Health (DEH) to investigate system failures. Primarily a complaint driven process, the Department investigates all suspected incidents of improper discharge. Staff use a variety of enforcement tools including citation, criminal prosecution and summary abatement to mitigate discharges from septic system failures.

The overwhelming majority of septic system failures are confined to the property and are effectively abated, providing minimal impact to the MS4. In cases where there are clustered failures or violations indicating a previously unknown or deteriorating geological condition, DEH has and will continue to provide additional investigations to identify the geological condition and its extent. Where necessary for the ongoing control of on-site waste generation DEH provides support to efforts to bring sewers to the community.

The above process is being applied to Quail Valley, from which septic failures are implicated in pathogenic, nitrogen and phosphorus contamination to Canyon Lake. DEH has conducted a sanitary survey of the Quail Valley area and is working with the local sewering agencies and the Santa Ana Regional Board to evaluate the provision of sewers. DEH is also drafting revisions to Ordinance No. 650 to provide additional controls to mitigate these failures.

Further, the Permittees have added the base of operations for portable toilet suppliers to their industrial/commercial inspection lists and prioritized them according to their threat to water quality.

Santa Margarita Region Specific Element

The SMR Permittees do not operate sanitary sewer systems nor do they have any authority over the design, operation or maintenance of these systems. In their Individual SWMP, each SMR Permittee describes their program element that addresses the prevention, response procedures, containment, and cleanup of sewage spills into the MS4 and the prevention of contamination of surface waters, groundwaters, and soil by sanitary waste to the MEP. In developing their program element, the SMR Permittees considered the following actions:

- Development and implementation of a procedure to be notified of all sewage spills from private laterals and failing septic systems into the MS4.
- Coordination of sewage spill prevention, containment, and response activities through appropriate departments, programs, and agencies to ensure protection of Receiving Waters.
- Conducting municipal activities such as street repair and tree planting in a manner that minimizes damage to sewer lines and blockage of sewer lines by tree roots.
- Identifying priority areas for sewage spills within their jurisdiction.
- Educating the public on actions they can take to prevent sewage spills.

4.8 WASTE COLLECTION PROGRAMS

4.8.1 Household Hazardous Waste (HHW) Collection and Anti-freeze, Batteries, Oil, and Latex Paint (ABOP) Collection Programs

The Permittees participate in the HHW and ABOP collection programs in conjunction with the Riverside County Department of Environmental Health (DEH). The DEH has conducted the collections of HHW and ABOP materials since 1993 to discourage illegal disposal and to assist residents in properly disposing potentially hazardous or toxic materials.

At least two mobile HHW collection events are held at sites in the SAR and two within the SMR and at additional sites countywide. Collection events are scheduled periodically on weekends from 9:00 AM until 2:00 PM. The District also supports five permanent HHW/ABOP collection sites. Two of these sites are in the SAR, one is in the SMR, and two are in the Whitewater Region. The sites are open Saturdays from 9:00 AM until 2:00 PM with the exception of holiday weekends. Mobile and permanent site locations may vary over time. Details, site locations, maps and schedules of operation for both the

HHW and ABOP collection events are available on the DEH web site at http://www.rivcoeh.org/hhhw.htm or by calling (800) 506-2555 or (951) 358-5256.

Examples of wastes that are accepted at HHW collection events include the following items:

- Kitchen - Aerosol cans, aluminum cleaner with acid, ammonia-based cleaner, furniture polish, oven cleaner.
- Bathroom - Household batteries, flea powder, kerosene/lamp oil, lighter fluid, nail polish remover, toilet/tub/tile cleaner.
- Garage - Antifreeze, auto batteries, transmission & brake fluid, carburetor cleaner, gasoline, diesel fuel, motor oil, engine de-greaser.
- Gardening - Fertilizer, fungicide, insecticides/pesticides, weed killer/herbicides, slug and snail poison.
- Workshop - Chlorine bleach, pool/spa chemicals, lighter fluid, paint stripper with solvent, paint thinner/turpentine, photographic chemicals, varnish, wood preservative, caulking material, latex & oil based paints.

No wastes from businesses or non-profit facilities or activities are accepted. Examples of wastes that are not accepted at HHW collection events include the following items:

- explosives/ammunition;
- 30 or 55 gallon drums;
- radioactive materials;
- appliances;
- tires:
- televisions or computer monitors (CRTs): and
- medical waste except syringes and hypodermic needles (sharps) in an acceptable container.

Along with materials collected at HHW and ABOP sites, CRTs can be taken to County landfills for recycling. Used motor oil for recycling may be taken to drop off at certified collection centers throughout Riverside County in addition to the ABOP sites.

4.8.2 Conditionally Exempt Small Quantity Generator (CESQG)

The CESQG Program is a hazardous waste pick-up disposal service for eligible businesses/non-profit organizations in Riverside County. This program provides an affordable way to legally dispose of limited quantities of hazardous waste.

Businesses that generate 27 gallons or 220 pounds of hazardous waste or 2.2 pounds of extremely hazardous waste per month can participate in the CESQG program. Businesses are required to use a licensed hazardous waste hauler to manifest and transport their waste. The most common participants in the CESQG program are painters, print shops, auto shops, builders, churches, schools, non-profit groups

and property managers. An appointment for pickup of hazardous waste or further information on the CESQG program can be obtained by calling 1-800-952-5566.

5.0 PERMITTEE FACILITIES AND ACTIVITIES

5.1 PLANNING PERMITTEE PROJECTS

The requirement for managing the quality and quantity of storm water runoff applies to Permittee projects meeting the definition of New Development or Significant Redevelopment[30] in the SAR or Priority Development Project[31] in the SMR. Although the Permittees do not plan, design, or construct most of the project categories defined as New Development or Priority Development per se, some Permittee projects may have similar functions or characteristics, or may conduct similar activities after construction is completed. For example, a corporation yard may include a vehicle and equipment maintenance facility, which is very similar to an automotive repair shop. Other examples are a civic center or library that is very similar in its characteristics to that of a commercial office building, and a senior citizens center or a jail may have a cafeteria, which is similar to a restaurant. In the SMR region certain road improvement projects would also be classified as Development Projects[32]. However, the SAR Third-Term MS4 Permit does not consider road improvements as Development Projects[33].

The process for planning, design, approval, and construction oversight of Permittee projects differs from the process of planning and permitting for private sector development projects. For example, typically private sector Development Projects[34] are regulated through a process of a development plan approval (i.e., conditions of approval); building or grading permit applications, and permit conditions. In comparison, Permittee projects may undergo design review by the contracting agency of the municipality; be issued permits or similar administrative authorizations; and are then regulated through the enforcement of contract terms and approved plans and specifications.

Each Permittee will incorporate the development of a project-specific WQMP into the process of planning, designing, and preparing construction plans and specifications for their public Development Projects[35] or provide an equivalent approach. Other public projects comply with Section 6.4.4 of the DAMP. Typically, the Permittee's design/engineering department or the design architect/engineer contractor would prepare a project-specific WQMP for a Permittee project. However, a discussion of funding will not be required in a Permittee's project-specific WQMP, as funding of the long-term operation and maintenance will be the responsibility of the Permittee owning and operating the public project once construction is completed. Also, where applicable, the operation and maintenance procedures for the Treatment Control BMPs included in a Permittee's project-specific WQMP will be incorporated into a municipal facility Pollution Prevention Plan (see DAMP Section 5.3.2 and Appendix J). For Permittee projects, upon completion of construction when contract close-out occurs the responsibility for implementation, operation, and maintenance of BMPs will transfer from the contractor

[30] As defined in Section VIII.B.1 of the Third-term SAR MS4 Permit.
[31] As defined in section F.2.b.1 of the SMR MS4 Permit.
[32] "Development Projects" refers to "Priority Projects" as defined in Section F.2.b.1 of the SMR MS4 Permit or "New Development and Significant Redevelopment" as defined in Section VIII.B.1 of the SAR MS4 Permit.
[33] Ibid.
[34] Ibid.
[35] Ibid.

to the appropriate Permittee department and become part of the Permittee Facilities and Activities Program (DAMP Section 5.3).

Each Permittee has developed and implemented policies and procedures to ensure that the planning and design of its projects reflect these requirements.

5.2 PERMITTEE CONSTRUCTION ACTIVITIES

The Permittees conduct construction projects in compliance with the latest version of the General Permit-Construction or the San Jacinto Watershed Construction Activity Permit, as applicable. Projects one acre or larger or which are part of a construction project one acre or larger must comply with these Construction Activity Permits.

Santa Ana Specific Elements

Permittee construction projects must comply with the General Permit-Construction, or the General Permit for Storm Water Discharges Associated with Construction Activity from Small Linear Underground/Overhead Projects[36], as applicable. However, they are conducted under authority of the Third-term SAR MS4 Permit. Prior to commencement of construction activities in the SAR, the Permittees notify the Executive Officer of the proposed construction project by submitting a Notice of Intent (NOI), which is provided in Attachment 5 of the Third-term SAR MS4 Permit. The NOI submittal fee is waived for the Permittee construction activities. If the Permittee construction site is within the San Jacinto watershed, the terms and conditions of the San Jacinto Watershed Construction Activities Permit apply, with the exception of the requirement for the Regional Board to review and approve the site-specific SWPPP. The Permittees give advance notice to the Executive Officer of planned changes in the construction activity that may result in non-compliance with the latest version of the Construction Activity Permits, as applicable. Upon completion of the construction project, the Permittees notify the Executive Officer of the completion of the project by submitting a Notice of Termination (NOT), which is also provided in Attachment 5 of the Third-term SAR MS4 Permit.

Santa Margarita Specific Elements

In the SMR, Permittee construction projects must comply with the General Permit-Construction or the General Permit for Storm Water Discharges Associated with Construction Activity from Small Linear Underground/Overhead Projects in the same manner as private construction projects. Additionally, the Standard Notes for Plans specified in Section 6.4.7.1 of the DAMP are minimum BMPs for Permittee construction projects.

Prior to the commencement of construction activities, the Permittees (or their contractor) develop and implement a Storm Water Pollution Prevention Plan (SWPPP) and a monitoring and reporting program that is site-specific for each construction project. As an aspect of routine construction oversight, Permittee staff will verify compliance with the applicable General Permit, if any, as well as conformance with plans or specifications and local ordinance. The SWPPP is kept at the construction site and is made

[36] SWRCB Order No. 2003-0007-DWQ; NPDES General Permit No. CAS000005.

available to the public and/or Regional Board staff upon request. Additionally, upon request, the Permittees will provide the Regional Board staff with a copy of the site-specific SWPPP. Emergency public works projects required to protect public health and safety are not required to prepare a SWPPP, nor are they required to file a NOI or provide advance notice to the Executive Officer of planned changes that may result in non-compliance with the Construction Activity Permits.

The SWPPP and the monitoring and reporting program prepared and implemented for a Permittee's construction project is consistent with the requirements of the latest version of the General Permit-Construction, as applicable for the size and location of the site.

5.3 OPERATION AND MAINTENANCE OF PERMITTEE FACILITIES

5.3.1 MS4 Maintenance

The Permittees developed maintenance schedules for the structural control and treatment control BMPs and the MS4, are implementing those maintenance schedules and report on the BMP and MS4 maintenance activities annually. These maintenance schedules address clean-out schedules and frequencies for the Permittees open channels, catch basins, retention/detention basins, and wetlands created for Urban Runoff treatment. Wastes and materials removed are disposed of per applicable laws and appropriate BMPs, as described in Section 5.3.2, are deployed to minimize impacts to the Receiving Waters to the MEP.

Santa Margarita Specific Elements

In the SMR, the maintenance activities implemented by each Permittee include, at a minimum, the following:

a) Inspection of all of the Permittee's catch basins and storm drain inlets at least annually between May 1 and September 30. If accumulated waste is visible, the catch basin, or storm drain inlet, is cleaned out. Additional cleaning is conducted as necessary;

b) Anthropogenic litter is removed from the Permittee' open channels at least annually between May 1 and September 30, with additional removal as necessary;

5.3.2 Other Municipal Facilities and Activities

The 1996 SAR MS4 Permit required the Permittees develop a Municipal Facilities Strategy to identify BMPs for activities conducted at Permittee facilities. The 1996 SAR MS4 Permit also identified the municipal activities for which the Permittees were required to select BMPs to reduce the potential for storm water pollution. These municipal facilities and activities included street sweeping, catch basin cleaning, maintenance yards, vehicle and equipment maintenance areas, waste transfer stations, corporation and storage yards, parks and recreational facilities, landscape and swimming pool maintenance activities, MS4 maintenance activities, and the application of pesticides. The Municipal Facilities Strategy is incorporated into this section of the DAMP.

As part of the development of the Municipal Facilities Strategy, the Permittees identified the types of municipal facilities they operate. During this process, the types of municipal facilities and the activities conducted at those facilities were identified as having the potential to contribute pollutants to Urban

Runoff as shown in Tables 5-1a and 5-1b. Table 5-2a lists the types and numbers of municipal facilities operated by the Permittees in the SAR. Table 5-2b lists the types and numbers of municipal facilities operated by the Permittees in the SMR. Antifreeze, battery, oil, and paint collection centers (ABOPs) were not identified as facilities of concern in the SAR as they are otherwise regulated under the Resource Conservation and Recovery Act (RCRA). Permittee facilities such as wastewater treatment plants, airports, and landfills have coverage under the General Permit-Industrial or under an individual NPDES permit. ABOPs and those facilities identified as covered under the General Permit-Industrial are listed in the SMR MS4 Permit and are included in Table 5-1b.

No waste transfer stations were identified as being operated by the Permittees and facilities that consisted of only administrative buildings and parking areas were not identified to be of concern regarding Urban Runoff pollution. Identification of the potential pollutants at each Permittee's municipal facilities was necessary in order to select appropriate candidate BMPs to reduce pollutants in Urban Runoff to the MEP. In addition, the Permittees were surveyed to identify the potential pollutants of concern typically associated with the activities performed at or based from the identified facilities of concern. Table 5-3 identifies pollutants of concern that may be associated with activities conducted at or based from Permittees' municipal facilities.

During the development of the facility specific strategies, the Permittees identified existing non-storm water discharges and characterized the discharges with respect to frequency, volume, flow, and duration. The Permittees eliminated or permitted such discharges. A template facility Pollution Prevention Plan for Permittee facilities, including an annual inspection form, was developed and is provided in Appendix J. Facility-specific Pollution Prevention Plans based on this template, or similar templates, have been prepared for each of the facilities and activities listed in Table 5.2. These Pollution Prevention Plans are maintained and updated by the Permittees annually. Re-inspections and corrective actions are taken where deficiencies are found. The inspection reports, and documentation of resulting corrective actions, are kept for five years and are incorporated into the Pollution Prevention Plans.

Based on the facilities, associated activities and the pollutants of concern identified, a list of potential source control BMPs was developed by the Permittees. This list utilizes the BMP designations used in the 2003 California Stormwater Best Management Practice Handbooks[37] (Industrial and Municipal Handbooks). The list of potential source control BMPs includes:

Industrial Handbook References

- SC-10 Non-Storm Water Discharges
- SC-11 Spill Prevention, Control and Cleanup
- SC-20 Vehicle and Equipment Fueling
- SC-21 Vehicle and Equipment Cleaning
- SC-22 Vehicle and Equipment Repair
- SC-30 Outdoor Loading /Unloading of Materials

[37] California Stormwater Quality Association. January 2003. http://www.cabmphandbooks.com/ or CASQA, P.O. Box 2105, Menlo Park, California, 94026-2105.

- SC-31 Outdoor Liquid Container Storage
- SC-33 Outdoor Storage of Raw Materials
- SC-34 Waste Handling and Disposal
- SC-35 Safer Alternative Products
- SC-40 Contaminated or Erodible Areas
- SC-41 Building & Grounds Maintenance
- SC-42 Building Repair and Construction
- SC-43 Parking/Storage Area Maintenance
- SC-44 Drainage System Maintenance

Municipal Handbook References

- SC-10 Non-Storm Water Discharges
- SC-11 Spill Prevention, Control and Cleanup
- SC-20 Vehicle and Equipment Fueling
- SC-21 Vehicle and Equipment Cleaning
- SC-22 Vehicle and Equipment Repair
- SC-30 Outdoor Loading/Unloading
- SC-31 Outdoor Container Storage
- SC-32 Outdoor Equipment Maintenance
- SC-33 Outdoor Storage of Raw Materials
- SC-34 Waste Handling and Disposal
- SC-41 Building and Grounds Maintenance
- SC-43 Parking/Storage Area Maintenance
- SC-60 Housekeeping Practices
- SC-61 Safer Alternative Products
- SC-70 Road and Street Maintenance
- SC-71 Plaza and Sidewalk Cleaning
- SC-72 Fountains & Pools Maintenance
- SC-73 Landscape Maintenance
- SC-74 Drainage System Maintenance
- SC-75 Waste Handling and Disposal
- SC-76 Water and Sewer Utility Maintenance

This list is not intended to be all-inclusive. However, the BMPs listed are both effective and widely accepted. Permittees are encouraged to consult other sources of BMP information and consider implementation of additional methods and measures as appropriate. These BMPs are incorporated into the facility-specific Pollution Prevention Plans, as appropriate. A matrix identifying potential BMPs that

may be appropriate to implement for the municipal facilities and their associated activities is presented in Table 5-4. Fact sheets describing each of the source control BMPs can be viewed or downloaded from http://www.cabmphandbooks.com/.

Santa Margarita Region Specific Element

The SMR MS4 Permit requires the Permittees to prepare an inventory of the municipal facilities and activities listed in Tables 5-1a and 5-1b. The BMPs identified in Table 5-4 are minimum BMPs for these facilities in the SMR and are incorporated into the facility Pollution Prevention Plans. However, for Permittee facilities and/or activities tributary to CWA Section 303(d) impaired water bodies that generate pollutants for which the water body is impaired, additional specific BMPs to target that pollutant are implemented as necessary.

The Third-Term SMR MS4 Permit also requires the implementation of specific BMPs to manage the application, storage, and disposal of pesticides, herbicides, and fertilizers as associated with their municipal facilities and activities. At a minimum, the SMR Permittees:

1) Ensure that municipal applicators and distributors have appropriate training, permits, and certifications;
2) Utilize integrated pest management measures that rely on non-chemical solutions, to the extent practicable;
3) Incorporate native vegetation into facility landscaping;
4) Develop schedules for irrigation and chemical application; and
5) Collect and properly dispose unused pesticides, herbicides, and fertilizers.

These BMPs are addressed in the fact sheets for the following BMPs, which are included in Section 5.3.2 and identified as minimum BMPs:

- SC-35/SC-61, Safer Alternative Products
- SC-41, Building & Grounds Maintenance
- SC-60, Housekeeping Practices
- SC-73, Landscape Maintenance

5.4 FIRE BMPS

In coordination with the Riverside County Fire Agencies, the Permittees developed a list of appropriate BMPs to be implemented to reduce pollutants from fire training activities, fire hydrant/sprinkler testing or flushing and BMPs feasible for emergency fire fighting flows. These BMPs and the strategy for providing training and updating the list of BMPs are described in Appendix K.

5.5 TRAINING FOR MUNICIPAL MAINTENANCE EMPLOYEES

Staff involved in implementing a Permittee's municipal maintenance program receive annual training on the following topics:

- Requirements of the local storm water ordinances;
- Requirements of the Third-term MS4 Permits and DAMP;
- Municipal BMPs as described in Section 5.3.2 of the DAMP;
- Fertilizer and Pesticide Management
- Municipal Facilities Pollution Prevention Plan
- Other applicable pollution control measures.
- Requirements of EPA approved TMDLs.

In addition, staff responsible for restricted use pesticide application are trained and certified under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) requirements and the California Food and Agriculture Code. The Permittees sponsor training twice a year for municipal maintenance staff. Permittee staff may also attend training sponsored by third parties (for example, California Stormwater Quality Association) in lieu of Permittee-sponsored training. The Permittees individually maintain a log of trained staff and report training in the Annual Reports.

Table 5-1a. Municipal Facilities and Activities

Type of Municipal Facility	Activities of Concern Conducted
Corporate Yards[1]	Loading, unloading, handling, and storage of animal wastes, anti-freeze, asphalt, batteries, chemicals, concrete, diesel wastes, emulsions, fertilizer, fuel, green wastes, hazardous materials, new and used oil, paint products, pesticides, scrap metal, solvents, trash and debris, and wash water
	Filling of aboveground and underground storage tanks (ASTs and USTs) with fuels
	Dispensing of fuels to vehicles, equipment, and portable fuel containers
	Vehicle and equipment parking and storage
	Vehicle, equipment, and material washing and steam cleaning
	Leak and spill cleanup
	Landscape, garden, and general maintenance and cleaning
Warehouses	Loading, unloading, handling, and storage of materials
	Landscape, garden, and general maintenance and cleaning
Fire and Police Stations	Loading, unloading, handling, and storage of antifreeze, chemicals, new and used oil, scrap metal, and trash and debris
	Filling of ASTs and USTs with fuels
	Dispensing fuel
	Vehicle and equipment maintenance
	Vehicle and equipment parking and storage
	Vehicle washing and steam cleaning
	Leak and spill cleanup
	Landscape, garden and general maintenance and cleaning
Hazardous Materials Storage Facilities[2]	Loading, unloading, handling, and storage of potentially hazardous materials
	Leak and spill cleanup
Animal Shelters	Loading, unloading, handling, and storage of animal wastes for off-site recycling, chemicals, and fuel
	Vehicle, equipment, and material washing
	Leak and spill cleanup
	Landscape, garden, and general maintenance and cleaning
Swimming Pools	Storage and use of chemicals, including chlorine
	Filter maintenance and backwashing
	Landscape, garden, and general maintenance and cleaning
Water Treatment Facilities	Loading, unloading, handling, and storage of materials
	Filling of ASTs and USTs with fuels
	Vehicle washing and steam cleaning
	Leak and spill cleanup
	Landscape, garden, and general maintenance and cleaning

1 Corporation yards include equipment, transit maintenance, public works, fleet maintenance, civic centers, and parks and recreation equipment yards.

2 Includes household hazardous waste collection facilities

Table 5-1b. Additional Municipal Facilities and Activities in Santa Margarita Region Inventory

Type of Municipal Facility	Activities of Concern Conducted
Roads, streets, highways and parking facilities	Leak and spill cleanup
	Stripping
	Sawcutting
	Sealing
Flood management projects, flood control devices and drainage facilities and associated maintenance activities	Leak and spill cleanup
	Vegetation control
Active or closed municipal/ sanitary landfills	Vehicle and equipment parking and storage
	Vehicle and equipment maintenance
	Leak and spill cleanup
POTWs and sanitary sewage collection facilities	Loading, unloading, handling and storage of materials
	Filling of ASTs and USTs with fuels
	Vehicle washing and steam cleaning
	Landscape, garden and general maintenance and cleanup
Sites for disposing and treating sewage sludge	Sewage sludge application
Municipal airfields	Leak and spill cleanup
	Filling of ASTs and USTs with fuels.
	Landscape, garden and general maintenance and cleaning
	Vehicle and equipment parking and storage
Parks and recreational facilities, including golf courses	Leak and spill cleanup
	Filling of ASTs and USTs with fuels
	Landscape, garden and general maintenance and cleaning
Cemeteries	Landscape, garden and general maintenance and cleaning
Other landscaped areas	Landscape, garden and general maintenance and cleaning
Facilities and activities tributary to a 303(d) listed water body or ESA	Where pollutants are generated for which the water body is impaired or which discharge directly to an Environmentally Sensitive Areas (ESAs).
Other facilities and activities	Facilities and activities that Permittee determines may contribute a significant pollutant load to the MS4

Table 5-2a. Santa Ana Region Permittees Municipal Facilities Matrix[1]

Permittee	Corporate Yards	Parks & Recreation Facilities	Warehouses	Fire Stations	Police Stations	Hazardous Materials Storage Facilities	Animal Shelters	Swimming Pools	Potable Water Treatment Facilities
District	1								
Riverside County	19		1	60		5	3		
Beaumont	2				1			1	
Calimesa	1								
Canyon Lake[2]									
Corona	1	2	1	7	1	1	1	2	3
Hemet	2			3	1				
Lake Elsinore	1								
Moreno Valley	1						1		
Murrieta	1	19		3	1			1	
Norco	1			2			1	1	
Perris	1								
Riverside	1			13	2	10		8	
San Jacinto	1				1			1	

1 This matrix does not include Permittee facilities having coverage under individual NPDES permits or the General Permit for Storm Water Discharges Associated with Industrial Activity.

2 The City of Canyon Lake does not own nor operate any municipal facilities.

Table 5-2b. Santa Margarita Region Permittees Municipal Facilities Matrix[1]

Permittee	Corporate Yards	Parking Lots & Structures	Parks & Recreation Facilities	Swimming Pools	Airfields	Fire Stations	Police Stations	Closed Landfills	Solid Waste Transfer Facilities	HHW Collection Facility
District	1									
Riverside County	3	8	3		1	11	1	1	1	1
Murrieta	1		34	1		3	1			
Temecula	1	3	35	3		2				

1 The SMR Permittees do not own or operate facilities in the following facility categories identified in the Third-term MS4 Permit: golf courses; cemeteries; warehouses; hazardous materials storage facilities; animal shelters; potable water treatment facilities; sanitary sewer collection systems; wastewater treatment facilities; land application sites; sites for treatment or disposal of sewage sludge; active landfills; uncontrolled sanitary landfills; incinerators; or hazardous waste treatment, disposal, and recovery facilities

Table 5-3. Potential Pollutants of Concern

Potential Pollutants	Material Loading, Unloading, Handling, or Storage	Filling of ASTs & USTs	Dispensing Fuel	Vehicle & Equipment Maintenance	Vehicle & Equipment Parking and Storage	Vehicle & Equipment Material Washing & Steam Cleaning	Leak & Spill Cleanup	Landscape, Garden, and General Maintenance & Cleaning
Animal Wastes	X							
Anti-freeze	X			X	X		X	
Asphalt	X							
Acid	X			X				
Chemicals	X			X	X		X	
Concrete	X						X	
Diesel Wastes	X			X			X	
Emulsions	X						X	
Fertilizer	X						X	
Fuel		X	X	X			X	
Green Wastes	X							X
Hazardous Materials	X			X	X		X	X
Herbicides	X						X	X
New/Used Oil	X			X			X	
Oil and Grease Spills	X			X	X	X	X	
Paint Products	X						X	X
Pesticides	X						X	X
Scrap Metal	X			X				
Solvents	X			X			X	
Trash and Debris	X							X
Wash Waters						X		

Table 5-4. Potential Source Control BMPs for Municipal Facilities and Activities

Activities	BMP References from Industrial Handbook															BMP References from Municipal Handbook																				
	SC-10	SC-11	SC-20	SC-21	SC-22	SC-30	SC-31	SC-32	SC-33	SC-34	SC-35	SC-40	SC-41	SC-42	SC-43	SC-44	SC-10	SC-11	SC-20	SC-21	SC-22	SC-30	SC-31	SC-32	SC-33	SC-34	SC-41	SC-43	SC-60	SC-61	SC-70	SC-71	SC-72	SC-73	SC-74	SC-75	SC-76
Material Loading/Unloading/Handling/ Storage						X	X	X	X									X				X	X		X												
Waste Handling and Disposal	X							X		X							X									X			X							X	
Filling of ASTs/USTs			X															X	X																		
Dispensing Fuel			X															X	X																		
Vehicle/Equipment Maintenance/Repair					X						X							X			X			X													
Vehicle/Equipment Parking and Storage																																					
Vehicle and Equipment Cleaning	X			X				X			X						X			X										X						
Leak and Spill Cleanup	X	X					X	X									X	X											X							
Construction														X																							
Landscaping, Garden, and General Maintenance and Cleaning	X										X	X	X	X	X	X	X										X	X	X	X	X	X	X	X	X		X

6.0 DEVELOPMENT PLANNING

6.1 INTRODUCTION

With the adoption of the Third-term MS4 Permits, the Permittees were required to modify the DAMP, including revisions to meet requirements related to the planning and permitting of Development Projects[38] within their jurisdictions and to ensure that pollutant loads from development projects have been reduced to the MEP. This program element links a Co-Permittee's General Plan, environmental review process, and development approval and permitting processes to the later phases of detailed design, construction and operation. A General Plan specifies policies that guide development. The environmental review process examines potential impacts from proposed development with respect to the General Plan policies and many environmental issues, including water quality, and includes consideration of mitigation measures to reduce any identified significant impacts.

The development approval and permitting processes carries forth project-specific requirements in the form of conditions of approval, design specifications, tracking, inspection, and enforcement actions. These three "front-end" planning processes must be coordinated and linked to the later phases of design, construction and operation for development projects to ensure Urban Runoff quality protection features are planned, designed and evaluated in accordance with the Permittees' goals for protection of Receiving Waters. Figure 6-1 is a generalized flow diagram that depicts the relationship of the General Plan, environmental review process and development planning and permit process, as well as the project design, construction, and operation phases.

6.2 GENERAL PLAN

6.2.1 Background

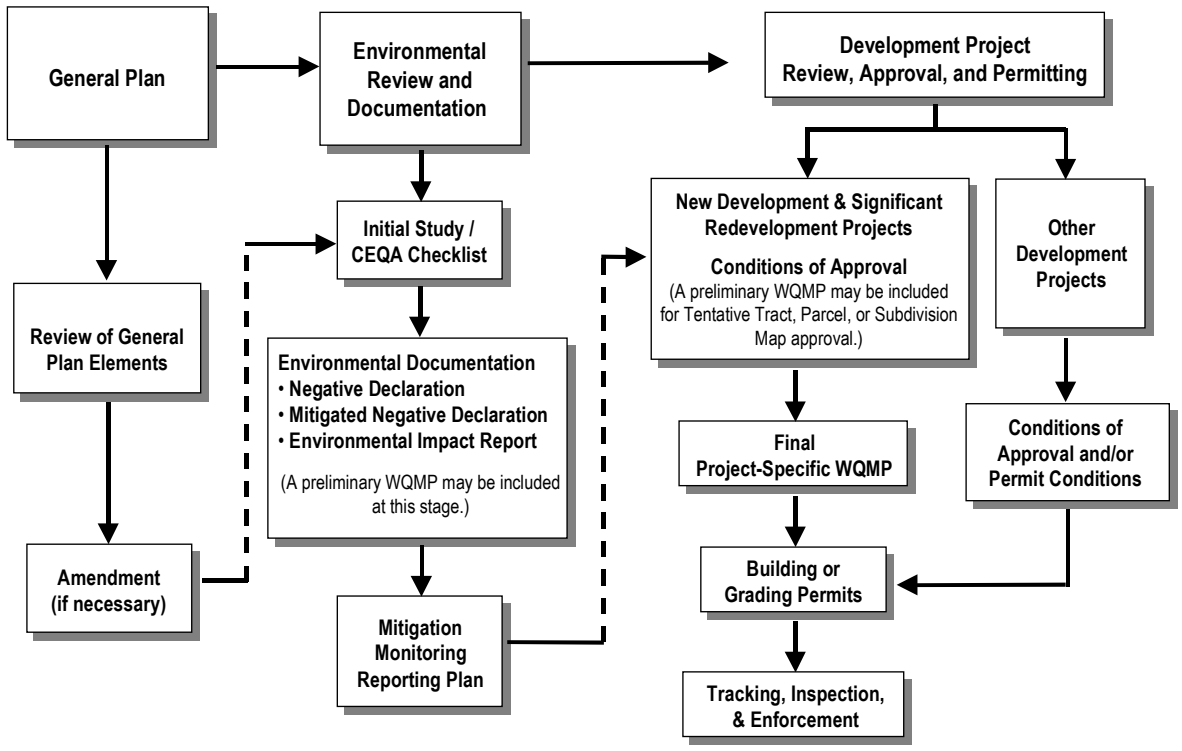
The General Plan consists of seven mandatory elements and any optional element that a city or county chooses to adopt. The mandatory elements include:

- Land Use
- Open Space
- Circulation and Infrastructure
- Conservation
- Housing
- Safety
- Noise

Any optional elements that are adopted by a city or the County, such as Public Facilities, have equal authority as the mandatory elements. Each city council and the County Board of Supervisors adopt zoning, subdivision and other ordinances to regulate land uses and to carry out the policies in the General Plan. The General Plan is also used to guide decision-makers in determining whether or not land use proposals are consistent with the applicable goals, objectives, and policies.

[38] "Development Projects" refers to "Priority Projects" as defined in Section F.2.b.1 of the SMR MS4 Permit or "New Development and Significant Redevelopment" as defined in Section VIII.B.1 of the SAR MS4 Permit.

Figure 6-1. Relationship between General Plan, Environmental Review Process and Development Permit Process



A General Plan Amendment is a request to revise some component of a city's or the County's General Plan. This can include addition, deletion or modification of goals and policies; modifications to the land use map or other diagrams; or other changes. A General Plan Amendment is a legislative act. Under State law, General Plan Amendments are allowed four times per year (California Government Code §65358(b)). Most General Plan Amendments are carried out in conjunction with a specific development proposal, although a city, the County, or any other agency or party can request an amendment without a specific development proposal in mind. A General Plan Amendment must be approved by the planning commission and city council or at the County level by the Board of Supervisors at public hearings. In approving a General Plan Amendment, the approving body must assess the policy implications of the proposed General Plan Amendment and the impact and compatibility of the proposed General Plan Amendment on the long-term goals and desires of a city or the County and its citizens. In evaluating a proposed General Plan Amendment, the approving body must look at the "global" impacts of the proposed amendment. Although a General Plan Amendment may be proposed in conjunction with a specific development proposal, the amendment proposed might have policy and/or land use impacts far beyond any given project or property.

Various elements of a city's or the County's General Plan may contain existing goals and policies that can be related to watershed protection and the management of Urban Runoff. For example, the quantity and quality of Urban Runoff may be controlled by the type, location, and density of development. Such controls may be established through policies commonly found in the Land Use and Open Space Elements of the General Plan (e.g., development policies, development location guidelines, landscaping guidelines, open space policies, policies on preservation of and integration with natural features).

Development of local streets and roads (regulated under the policies of the Circulation and Infrastructure Element and to some extent, the Safety Element) results in increased impervious surfaces and accumulation of storm water pollutants from vehicles. The Public Facilities Element provides management policies for construction, operation and maintenance of various public facilities including flood control channels and storm drains, which convey Urban Runoff. The Conservation Element contains policies on water conservation that can be linked to water quality protection through efficient use of irrigation systems to prevent runoff.

6.2.2 General Plan Review and Amendment

The Permittees recognize the importance of addressing watershed protection and the management of Urban Runoff in the land development process. Therefore, watershed protection principles and objectives for managing Urban Runoff for land development are reflected in the appropriate policies, goals, and objectives of each Co-Permittee's General Plan. The Permittees have reviewed their General Plans to ensure that the following principles and policies are properly considered:

Santa Ana Region Specific Elements

- Limit disturbance of natural water bodies and drainage systems; conserve natural areas; protect slopes and channels; minimize impacts from Urban Runoff on the biological integrity of natural drainage systems and water bodies;
- Minimize changes in hydrology and pollutant loading; require incorporation of source control and structural BMPs to mitigate the projected increases in pollutant loads and flows; ensure that post-construction runoff rates and velocities from a site do not result in significant adverse impact on downstream erosion and stream habitat; limit the quantity of Urban Runoff directed to impermeable surfaces and the MS4s; and maximize the percentage of permeable surfaces to allow more percolation of Urban Runoff into the ground;
- Preserve wetlands, riparian corridors, and buffer zones; establish reasonable limits on the clearing of vegetation from the project site;
- Encourage the use of BMPs to manage Urban Runoff quality and quantity;
- Provide for appropriate permanent measures to reduce pollutant loads in Urban Runoff from the development site; and
- Establish development guidelines for areas particularly susceptible to erosion and sediment loss.

Santa Margarita Region Specific Elements

- Minimize the amount of impervious surfaces and directly connected impervious surfaces areas of development and, where feasible, slow runoff and maximize on-site infiltration of runoff.
- Implement pollution prevention methods supplemented by source control and treatment control BMPs. Use small collection strategies located at, or as close as possible to, the source

(i.e., the point where water initially meets the ground) to minimize the transport of urban runoff and pollutants offsite and into an MS4.

- Preserve, and where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones. Encourage land acquisition of such areas.
- Limited disturbance of natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.
- Prior to making land use decisions, utilize methods available to estimate increases in pollutant loads and flows resulting from projected future development. Require incorporation of appropriate BMPs to mitigate the projected increases in pollutant loads and flows.
- Avoid development of areas that are particularly susceptible to erosion and sediment loss; or establish development guidance that identifies these areas and protects them from erosion and sediment loss.
- Reduce pollutants associated with vehicles and increasing traffic resulting from development.
- Post-development runoff from a site shall not contain pollutant loads that cause or contribute to an exceedance of receiving water quality objectives and which have not been reduced to the MEP.

It should be noted that in some cases, these concepts are better addressed in other areas of Development Planning such as in the CEQA process or through the conditioning of a project in the development review process. Further, many Permittees within the SAR and SMR have incorporated the Western Riverside County Multi-Species Habitat Conservation Plan (MSHCP) into their general plan. The MSHCP addresses many of the concepts identified in the Third-term MS4 Permits. The MSHCP requires the conservation of over 500,000 acres of new land within the County, including significant lands adjacent to or encompassing receiving waters such as the San Jacinto River, Santa Ana River, and Santa Margarita River, including tributaries. The plan transfers approximately 1,000,000 acres of existing conservation lands to a specified land conservancy. The MSHCP also finds that participating Permittee's existing general plans, zoning ordinances and polices include measures capable of implementing the following planning concepts consistent with the Third-term MS4 Permit considerations identified above:

- Measures to ensure that the quality and quantity of runoff discharged to MSHCP conservation areas is not altered in any adverse way when compared to existing drainage conditions;
- Measures to avoid discharge of untreated surface runoff from developed and paved areas into MSHCP conservation areas; and
- Measures to require storm water systems to be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within MSHCP conservation areas.

When reviewing the General Plan in the future, special attention will be given to how the elements address the potential impacts of Urban Runoff on Receiving Waters. The Co-Permittees will keep in mind the following questions during this review, which may trigger the need for specific Urban Runoff

pollution protection policies in various elements of their General Plan either as new policies and objectives or amended text to existing policies and objectives:

- Are there sensitive Receiving Waters in or downstream of the jurisdiction?
- Are there existing or proposed Total Maximum Daily Loads (TMDLs) or other such regulations pertaining to receiving waters within the jurisdiction?
- Are major Development Projects expected?
- Are major new infrastructure projects anticipated (e.g., roads, sewer, flood control, storm drains)?
- Is Urban Runoff affecting recreational use of water bodies within the jurisdiction?

If a Co-Permittee initially determines that elements of their General Plan do not adequately consider watershed protection principles and objectives for managing Urban Runoff, the need for and the extent of revisions to the General Plan should be coordinated with its legal counsel. If a Co-Permittee, in consultation with its legal counsel, determines that it needs to amend elements of its General Plan to incorporate watershed and Urban Runoff management policies, goals or objectives, the Co-Permittee will develop a work plan and schedule for the General Plan amendment(s). In revising elements of the General Plan, associated maps will be revised, as necessary, to reflect location-specific watershed protection/Urban Runoff quality management policies, and eliminate conflicts among land use districts, permitted land uses, and Urban Runoff-specific goals and policies. For further reference, the Co-Permittees may review the sample general plan amendment text and sample urban runoff water quality general plan element outlined in Model Urban Runoff Program, A How to Guide for Developing Urban Runoff Programs for Small Municipalities (City of Monterey, et al, July 1998). This document can be viewed or downloaded at http://www.waterboards.ca.gov/stormwtr/murp.html.

Should a Co-Permittee amend elements of its General Plan, the Co-Permittee will provide the draft General Plan amendments to the Regional Board for comment.

6.3 CEQA Environmental Review Process

6.3.1 CEQA Initial Study Process

The Third-term MS4 Permits required the Permittees to review their CEQA processes to ensure that Urban Runoff issues are properly considered and addressed. Where necessary, the processes were revised to consider and mitigate impacts to Urban Runoff quality and Receiving Waters.

Santa Ana Region Specific Elements

The Third-term SAR MS4 Permit (Section VIII.8.A.8) identifies the following potential impacts to be considered during the CEQA process:

- Potential impact that construction of the project may have on Urban Runoff.
- Potential impact that operation of the project may have on Urban Runoff.

- Potential for discharge of pollutants in Urban Runoff from areas identified within the project site to be used for material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas.
- Potential for pollutants in Urban Runoff discharged from a project site that may affect the beneficial uses of the Receiving Waters.
- Potential for significant changes in the flow velocity or volume of Urban Runoff from a project site that would result in environmental harm.
- Potential for significant increases in erosion of a project site or surrounding areas.
- Potential for the project to discharge Pollutants identified as impairing downstream Receiving Waters.

Santa Margarita Region Specific Elements

The Third-term SMR MS4 Permit (Section F.3) identifies the following potential impacts to be considered during the CEQA process:

- Could the proposed project result in increased impervious surfaces and associated increased runoff? Consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical storm water pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen demanding substances, and trash).
- Could the proposed project result in significant alteration of receiving water quality during or following construction?
- Could the proposed project result in increased impervious surfaces and associated increased runoff?
- Could the proposed project create significant adverse environmental impact to drainage patterns due to changes in runoff flow rates or volumes?
- Could the proposed project result in increased erosion downstream?
- Is the project tributary to an already impaired water body, as listed on the CWA section 303(d) list? If so, can it result in an increase in any pollutant for which the water body is already impaired?
- Is the project tributary to other environmentally sensitive areas? If so, can it exacerbate already existing sensitive conditions?
- Could the proposed project have a potentially significant environmental impact on surface water quality of marine, fresh, or wetland waters?
- Could the proposed project have a potentially significant adverse impact on groundwater quality?
- Could the proposed project cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses?

- Can the project impact aquatic, wetland, or riparian habitat?

These Urban Runoff pollution issues have been considered in the Initial Study process (project application form and checklist) and in the preparation and reviews of Environmental Impact Reports (EIRs) discussed in the subsections that follow.

6.3.1.1 Project Application Form

The current project application form contained in Appendix L (CEQA Guidelines, State of California Office of Planning and Research, February 2001) is used by nearly all the Permittees in their environmental review process. The CEQA Guidelines identify specific questions about the project to help environmental planners assess the potential for significant environmental impacts. However, there are no specific project description questions that help characterize the potential for impacts associated with Urban Runoff. For this reason, each Permittee has reviewed their existing project application forms and, as necessary, has revised their application form to include line items for:

- Expected percent change in pervious surface area of the site; and
- Submittal of preliminary project-specific Water Quality Management Plan (WQMP), if applicable, (along with required submittal of other development plans).

6.3.1.2 Initial Study Checklist

The current Initial Study Checklist contained in Appendix M [CEQA Guidelines, State of California Office of Planning and Research, February 2001] is also used by nearly all Permittees in their environmental review process. This Initial Study Checklist contains the following considerations under the environmental impact category "Hydrology and Water Quality (Section VIII)":

Would the project:

a) Violate any water quality standards or waste discharge requirements?

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?

e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Inundation by seiche, tsunami, or mudflow?

The Permittees have concluded that considerations of potential impacts associated with Urban Runoff are generally covered in questions a) through f) of the Initial Study Checklist (Appendix M), but with less specificity than the questions provided in the Third-term MS4 Permits. To ensure that issues related to Urban Runoff are thoroughly considered in completing the Initial Study Checklist, the Permittees have reviewed the Initial Study checklist and made appropriate changes. The Permittees have considered adding the following question to the Hazardous and Hazardous Materials Section (Section VII) or Utilities and Service Systems Section (Section XVI) of the Initial Study Checklist used for projects within their jurisdiction:

> "Would the project include new or retrofitted storm water Treatment Control BMPs, (e.g., water quality treatment basin, constructed treatment wetlands), the operation of which could result in significant environmental effects (e.g., increased vectors and odors)?"

Further, to promote the consideration of the various impacts related to Urban Runoff, the Permittees may provide the list of permit considerations specified in the Third-term SAR (Section VIII.A.8) and SMR (Section F.3) MS4 Permits to:

- Environmental planning staff for use in preparing and reviewing CEQA documents for internal city/county projects and when reviewing CEQA documents prepared by the private sector
- Consultants and other members of the private sector for use in preparing CEQA documents
- Project applicants during the CEQA preliminary review process
- Participants attending training related to the requirements of the Third-term MS4 Permit, the DAMP, or the WQMP.

6.3.2 Environmental Review Guidance for CEQA Initial Studies and CEQA Document Preparation and Review

In evaluating the questions in Section VIII, Hydrology and Water Quality, of the CEQA Initial Study Checklist (or any additional questions added in response to provisions of the Third-term MS4 Permits), the Permittees may use the guidance provided in Appendix N of this DAMP. The guidance provided in Appendix N may also be used for the preparation or review of CEQA documents including Negative Declarations, Mitigated Negative Declarations and EIRs.

6.4 DEVELOPMENT PROJECT REVIEW, APPROVAL, AND PERMITTING

6.4.1 Project Review, Approval, and Permitting Process Overview

Development Projects[39] submitted to the SAR Co-Permittees after December 31, 2004 are conditioned to require the preparation, review, and approval of a project-specific WQMP. Development Projects under the jurisdiction of the SMR Co-Permittees that do not have Conditions of Approval or Tentative Tract, Subdivision, or Parcel map approval by July 13, 2005 are conditioned to require the preparation, review, and approval of a project-specific WQMP. Other development projects are required to incorporate site design, source control, and/or treatment control BMPs through Co-Permittee Conditions of Approval or permit conditions. This section describes the processes for incorporating post-construction (permanent) BMPs into the development project review, approval, and permitting process. This section also describes modifications to conditions of approval and plan check processes to assure consistency with the requirements of the Third-term MS4 Permits.

6.4.2 Identifying Development Projects Requiring a Project-Specific WQMP

To ensure that Development Projects are identified as early in the planning process as possible, the Permittees utilize a checklist to document the determination as to whether a project requires a project-specific WQMP or not. Example checklists that may be used by the Co-Permittees for this purpose are shown in Figure 6-2a and Figure 6-2b, the SAR and the SMR, respectively.

6.4.3 Development Projects

For Development Projects[40] submitted to the SAR Co-Permittees after December 31, 2004 are conditioned to the project applicant is required to prepare a project-specific WQMP that is in conformance with the Riverside County Water Quality Management Plan for Urban Runoff (a copy of which is included as Appendix O), prior to issuance of the first permit. For Development Projects under the jurisdiction of the SMR Co-Permittees that do not have Conditions of Approval or Tentative Tract, Subdivision, or Parcel map approval by July 13, 2005, the project applicant is required to prepare a project-specific WQMP that is in conformance with the Riverside County Water Quality Management Plan for Urban Runoff, prior to issuance of the first permit. At its discretion, a Co-Permittee may require a project-specific WQMP for projects prior to these implementation dates. The primary objective of the Riverside County Water Quality Management Plan for Urban Runoff, through application of Site Design, Source Control, and Treatment Control BMPs on a project-specific and/or sub-regional or regional basis, is to ensure that the land use approval and permitting process of each Co-Permittee will minimize the impact of Urban Runoff.

Since some Development Projects are subject to discretionary approval during the planning phase (land use entitlement) and ministerial approval for subsequent grading or building permits, project applicants may be required to submit a preliminary project-specific WQMP for discretionary project approval (land use entitlement). The level of detail in a preliminary project-specific WQMP submitted during the land

[39] "Development Projects" refers to "Priority Projects" as defined in Section F.2.b.1 of the SMR MS4 Permit or "New Development and Significant Redevelopment" as defined in Section VIII.B.1 of the SAR MS4 Permit.

[40] Ibid.

use entitlement process depends upon the level of detail known about the overall project design at the time project approval is sought. Project applicants are required to submit for Co-Permittee review and approval, a final project-specific WQMP that is in substantial conformance with the preliminary project-specific WQMP prior to the issuance of any building or grading permit.

Figure 6-2a. Checklist – Projects Requiring Project-Specific WQMPs within the Santa Ana Region

Checklist for Identifying Projects Requiring a Project-Specific WQMP within the Santa Ana Region

Project File No.	
Project Name:	
Project Location:	
Project Description	

Proposed Project Consists of or Includes:	Yes	No
Significant Redevelopment: The addition or creation of 5,000 square feet or more of impervious surface on an existing developed site. This includes, but is not limited to, construction of additional buildings and/or structures, extension of the existing footprint of a building, construction of impervious or compacted soil parking lots. Does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, the original purpose of the constructed facility or emergency actions required to protect public health and safety		
Residential development of 10 dwelling units or more, including single family and multi-family dwelling units, condominiums, or apartments.		
Industrial and commercial development where the land area[1] represented by the proposed map or permit is 100,000 square feet or more, including, but not limited to, non-residential developments such as hospitals, educational institutions, recreational facilities, mini-malls, hotels, office buildings, warehouses, light industrial, and heavy industrial facilities.		
Automotive repair shops [Standard Industrial Classification (SIC) codes[2] 5013, 7532, 7533, 7534, 7537, 7538, and 7539].		
Restaurants (SIC code 5812) where the project site is 5,000 square feet or more.		
Hillside development that creates 10,000 square feet or more, of impervious surface(s) including developments in areas with known erosive soil conditions or where natural slope is 25 percent or more.		
Developments creating 2,500 square feet or more of impervious surface that is adjacent to (within 200 feet) or discharging directly into areas designated in the Basin Plan[3] as waters supporting habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law are rare, threatened, or endangered species (denoted in the Basin Plan as the "RARE" beneficial use) or waterbodies listed on the CWA Section 303(d) list of Impaired Waterbodies[4]. "Discharging directly to" means Urban Runoff from subject Development or Redevelopment site flows directly into aforementioned waterbodies. Urban Runoff is considered a direct discharge unless it first flows through a) a municipal separate storm sewer system (MS4) that has been formally accepted by and is under control and operation of a municipal entity; b) a separate conveyance system where there is co-mingling of flows with off-site sources; or c) a tributary or segment of a water body that is not designated with "RARE" beneficial uses nor listed on the 303(d) list before reaching the water body or segment designated as RARE or 303(d) listed..		
Parking lots of 5,000 square feet or more of impervious surface exposed to Urban Runoff, where "parking lot" is defined as a site or facility for the temporary storage of motor vehicles.		

1 Land area is based on acreage disturbed.

2 Descriptions of SIC codes can be found at http://www.osha.gov/pls/imis/sicsearch.html.

3 The Basin Plan for the Santa Ana River Basin, which has beneficial uses for Receiving Waters listed in Chapter 3, can be viewed or downloaded from www.swrcb.ca.gov/rwqcb8/pdf/R8BPlan.pdf.

4 The most recent CWA Section 303(d) list can be found at www.swrcb.ca.gov/tmdl/303d_lists.html.

DETERMINATION: Circle appropriate determination.

Any question answered "YES" ⟶ Project requires a project-specific WQMP.

All questions are answered "NO" ⟶ Project requires incorporation of Site Design BMPs and Source Control BMPs imposed through Conditions of Approval or permit conditions.

Figure 6-2b. Checklist – Projects Requiring Project-Specific WQMPs within the Santa Margarita Region

Checklist for Identifying Projects Requiring a Project-Specific SUSMP within the Santa Margarita Region

Project File No.	
Project Name:	
Project Location:	
Project Description	

Proposed Project Consists of or Includes:	Yes	No
Significant Redevelopment: The addition, creation, or replacement of at least 5,000 square feet of impervious surfaces on an already developed site of a project category or location as listed below in this table. This includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. [Note: Where redevelopment results in an increase of less than 50% of the impervious surfaces of a previously existing development, and the existing development was not subject to SUSMP requirements, the requirement for treatment control BMPs [MS4 Permit requirement F.2.b(3)]. applies only to the addition, and not to the entire development.]		
Housing subdivisions of 10 or more dwelling units. Includes single-family homes, multi-family homes, condominiums, and apartments.		
Commercial development greater than 100,000 square feet. Defined as any development on private land that is not for heavy industrial or residential uses where the land area for development is greater than 100,000 square feet. Includes, but is not limited to: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.		
Automotive repair shops. Includes facilities characterized by any one of the following Standard Industrial Classification (SIC) codes[1]: 5013, 5014, 5541, 7532, 7533, 7534, 7536, 7537, 7538, or 7539.		
Restaurants. A facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for treatment control BMPs [MS4 Permit requirement F.2.b(3)] and peak flow management [MS4 Permit requirement F.2.b(2)(a)].		
All Hillside development greater than 5,000 square feet. Any development that creates greater than 5,000 square feet of impervious surface which is located in an area with known erosive soil conditions, where the development will include grading on any natural slope that is 25% or greater.		
Environmentally Sensitive Areas (ESAs)[2]. All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.		
Parking lots of 5,000 square feet or more. A land area or facility for the temporary parking or storage of motor vehicles used personally for business or commerce.		
Streets, roads, highways, and freeways. Includes any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.		
Retail Gasoline Outlets (RGOs). Includes RGOs that meet the following criteria: (a) 5,000 square feet or more, or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles.		

1 Descriptions of SIC codes can be found at http://www.osha.gov/pls/imis/sicsearch.html.

2 Areas "in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would easily be disturbed or degraded by human activities and developments. ESAs subject to urban runoff requirements include, but are not limited to: all CWA Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the Basin Plan; water bodies designated with a RARE beneficial use in the Basin Plan; areas within the Western Riverside County Multi-Species Habitat Conservation Plan area that contain rare or especially valuable plant or animal life or their habitat; and any other equivalent environmentally sensitive areas that the Permittees have identified. The Basin Plan for the San Diego Basin (beneficial uses listed in Chapter 2) can be viewed or downloaded from www.swrcb.ca.gov/rwqcb9/programs/basinplan.html. The most recent CWA Section 303(d) list can be found at www.swrcb.ca.gov/tmdl/303d_lists.html.

DETERMINATION: Circle appropriate determination.

Any question answered "YES" ⟶ Project requires a project-specific WQMP.

All questions are answered "NO" ⟶ Project requires incorporation of Site Design BMPs and Source Control BMPs imposed through Conditions of Approval or permit conditions.

6.4.4 Other Development Projects

The Co-Permittees require Other Development projects (projects that are not Development Projects) to incorporate Site Design BMPs and Source Control BMPs, as applicable and feasible, into project plans through conditions of approval or building/grading permit conditions. For Other Development projects that directly discharge Urban Runoff to Receiving Waters listed as impaired on the State Board's 303(d) List, project-specific and/or sub-regional or regional Treatment Control BMPs may be required on a case-by-case basis. A summary of the BMP requirements for Other Development projects is shown in Table 6-1. Brief descriptions of Site Design BMPs and Source Control BMPs are provided in Appendix O, the Riverside County Water Quality Management Plan for Urban Runoff, Sections 4.5.2.1 and 4.5.2.2, respectively.

Table 6-1. Summary of BMPs for Other Development Projects

BMP Category		Applicable Projects
Site Design BMPs (See Appendix O, Section 4.5.1)		Required for all Other Development projects, to the extent applicable and feasible.
Source Control BMPs	**Non-Structural BMPs** (See Appendix O, Section 4.5.2.1)	Required for all Other Development projects. • Education/Training for Property Owners, Operators, Tenants, Occupants, or Employees • Activity Restrictions • Irrigation System and Landscape Maintenance • Common Area Litter Control • Street Sweeping Private Streets and Parking Lots • Drainage Facility Inspection and Maintenance
	Structural BMPs (See Appendix O, Section 4.5.2.2)	Required for all Other Development projects that incorporate the target project features. • MS4 Stenciling and Signage • Landscape and Irrigation System Design • Protection of Slopes and Channels • Provide: – Community Car Wash Racks – Wash Water Controls for Food Preparation Areas • Properly Design and Maintain: – Fueling Areas – Air/Water Supply Area Drainage – Trash Storage Areas – Loading Docks – Maintenance Bays – Vehicle and Equipment Wash Areas – Outdoor Material Storage Areas – Outdoor Work Areas or Processing Areas
Treatment Control BMPs: Project-Specific, Regional, or Sub-Regional (See Appendix O, Sections 4.5.3 and 5.0)		May be required on a case-by-case basis for Other Development projects that discharge Urban Runoff to Receiving Waters listed as impaired on the State Board's 303(d) List.

6.4.5 Conditions of Approval

The Permittees have reviewed and revised their standard conditions of approval to ensure that the standard conditions are not in conflict with any provisions of the Third-term MS4 Permits, the DAMP, the General Permit-Construction, the San Jacinto Watershed General Permit for Storm Water Discharges Associated with Construction Activity, the General Permit-Industrial, and adopted Total Maximum Daily Load allocations within their jurisdiction. For example, a condition requiring "sweeping or washing public access points within 30 minutes of dirt deposition" should be revised to specify that "washing" must include capture and proper disposal of all wash water.

To minimize the short-term and long-term impacts of Urban Runoff on Receiving Water quality from Development Projects and Other Development projects, Permittees have reviewed and will revise, or supplement their standard conditions of approval or building/grading permit conditions that may be used for projects to include the following conditions or the equivalent, as deemed appropriate:

- Prior to the issuance of any grading or building permits for projects that will result in soil disturbance of one or more acres of land, the applicant shall demonstrate that coverage has been obtained under California's General Permit for Storm Water Discharges Associated with Construction Activity (or the San Jacinto Watershed General Permit for Storm Water Discharges Associated with Construction Activity) by providing a copy of the Notice of Intent (NOI) submitted to the State Board (or the Santa Ana or San Diego Regional Boards) and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) number or other proof of filing.
- Projects that must comply with either the statewide General Permit for Storm Water Discharges Associated with Construction Activity or the San Jacinto Watershed General Permit for Storm Water Discharges Associated with Construction Activity shall prepare and implement a storm water pollution prevention plan (SWPPP). A copy of the current SWPPP shall be kept at the project site and be available for review upon request.
- Prior to grading or building permit close-out and/or the issuance of a certificate of use or a certificate of occupancy, the applicant shall:
  - Demonstrate that all structural BMPs have been constructed and installed in conformance with approved plans and specifications; and
  - Demonstrate that applicant is prepared to implement all non-structural BMPs included in the conditions of approval or building/grading permit conditions.
- For industrial facilities subject to California's General Permit for Storm Water Discharges Associated with Industrial Activity as defined by Standard Industrial Classification (SIC) code, prior to grading or building permit close-out and/or the issuance of a certificate of use or a certificate of occupancy, the applicant shall demonstrate that coverage has been obtained by providing a copy of the Notice of Intent (NOI) submitted to the State Board and a copy of the notification of the issuance of a Waste Discharge Identification (WDID) Number or other proof of filing.

Santa Margarita Region Specific Elements

Grading during the wet season should be limited and scheduled to coincide with seasonal dry weather periods to the extent feasible. Grading during the wet season should identify additional BMPs for rain events that may occur as necessary for compliance with the Third-term SMR MS4 Permit.

These and other conditions of approval applicable to Development Projects are provided in Section 2.2 of the Riverside County Water Quality Management Plan for Urban Runoff (Appendix O).

6.4.6 Review and Approval of Project-Specific WQMPs

Project-specific WQMPs may be submitted as "preliminary" during the discretionary or land use entitlement phase depending upon the level of detail known about the overall project design at the time project approval is sought. However, prior to issuance of grading or building permits, the project applicant must submit the final project-specific WQMP for review and approval by the Co-Permittee. The review and approval of a final project-specific WQMP is one of the last critical points at which a Permittee can impose conditions or standards that will minimize the impacts of Urban Runoff. To assist the Co-Permittees in conducting thorough and consistent reviews of project-specific WQMPs, the Co-Permittees utilize a WQMP Review Checklist. An example WQMP Review Checklist is included as Appendix P.

When reviewing project-specific WQMPs submitted for approval, Co-Permittees assess the potential project impacts on Receiving Waters and ensure that the project-specific WQMP adequately identifies such impacts, including all pollutants and hydrologic conditions of concern. The Co-Permittees examine the identified BMPs, as a whole, to ensure that they address the pollutants and conditions of concern identified within the project-specific WQMP. The project-specific WQMP is a project planning level document and as such is not expected to contain final BMP design drawings and details (these will be in the construction plans). However, the project-specific WQMP must identify and denote the location of selected structural BMPs, provide design parameters including hydraulic sizing of treatment BMPs and convey final design concepts. BMP fact sheets can be used in conjunction with project-specific design parameters and sizing to convey design intent. BMP fact sheets typically contain detailed descriptions of each BMP, applications, advantages/disadvantages, design criteria, design procedure, and inspection and maintenance requirements to ensure optimal performance of the BMPs

6.4.7 Plan Check: Issuance of Grading or Building Permits

6.4.7.1 Standard Notes for Plans

Prior to the issuance of a grading or building permit, Permittees require the applicant to include on the plans the following notes (or notes of substantially similar intent) that address pollution prevention to the MEP during the construction phase of a project on a year-round basis:

- Erosion control BMPs shall be implemented and maintained to minimize and/or prevent the entrainment of soil in runoff from disturbed soil areas on construction sites.

- Sediment control BMPs shall be implemented and maintained to prevent and/or minimize the transport of soil from the construction site.
- Stockpiles of soil shall be properly contained to eliminate or reduce sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking, or wind.
- Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented to eliminate or reduce transport from the site to streets, drainage facilities, or adjoining properties by wind or runoff.
- Runoff from equipment and vehicle washing shall be contained at construction sites and must not be discharged to receiving waters or the local storm drain system.
- All construction contractor and subcontractor personnel are to be made aware of the required best management practices and good housekeeping measures for the project site and any associated construction staging areas.
- At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins.
- Construction sites shall be maintained in such a condition that a storm does not carry wastes or pollutants off the site. Discharges other than storm water (non-storm water discharges) are prohibited, except as authorized by an individual NPDES permit, the statewide General Permit-Construction, or the San Jacinto Watershed General Permit for Storm Water Discharges Associated with Construction Activity. Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, solvents, detergents, glues, lime, pesticides, herbicides, fertilizers, wood preservatives, and asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids; concrete and related cutting or curing residues; floatable wastes; wastes from engine/equipment steam cleaning or chemical degreasing; wastes from street cleaning; and super-chlorinated potable water from line flushing and testing. During construction, disposal of such materials should occur in a specified and controlled temporary area on-site physically separated from potential storm water runoff, with ultimate disposal in accordance with local, state and federal requirements.
- Discharging contaminated groundwater produced by dewatering groundwater that has infiltrated into the construction site is prohibited. Discharging of contaminated soils via surface erosion is also prohibited. Discharging non-contaminated groundwater produced by dewatering activities may require a National Pollutant Discharge Elimination System (NPDES) permit issued by the Santa Ana or San Diego Regional Board.
- Construction sites shall be managed to minimize the exposure time of disturbed soil areas through phasing and scheduling of grading to the extent feasible and the use of temporary and permanent soil stabilization.
- BMPs shall be maintained at all times. In addition, BMPs shall be inspected prior to predicted storm events and following storm events.

6.4.7.2 Plan Check for Development Projects

Construction plans submitted by the applicant for plan check must incorporate the structural BMPs identified in the approved final project-specific WQMP. Once a Development Project[41] reaches the plan check phase, the project applicant should have an approved final project-specific WQMP in accordance with Section 2.2 of the Riverside County Water Quality Management Plan for Urban Runoff (Appendix O).

To gain an understanding of the water quality issues and structural BMPs required, Co-Permittees review the relevant CEQA documentation (including the Mitigation Monitoring and Reporting Program) if applicable, the conditions of approval, and the project-specific WQMP as part of the plan check process. Construction plans are reviewed for consistency with the project-specific WQMP. If the selected BMPs were approved in concept during the land use entitlement process, the applicant is required to submit detailed construction plans showing locations and design details of all BMPs that are in substantial conformance with the preliminary approvals. The construction plans are reviewed to assure that the plans are consistent with the BMP design criteria and guidance provided in Appendix O, the Riverside County Water Quality Management Plan for Urban Runoff.

6.4.7.3 Plan Check for Other Development Projects

For Other Development projects (projects that do not qualify as Development Projects), applicants will typically submit a grading or building permit application with construction plans that incorporate the BMPs (Site Design and Source Control) required by the conditions of approval.

6.4.8 Permit Closeout, Certificates of Use, and Certificates of Occupancy

The end of the construction phase is typically accompanied by the close out of permits and issuance of certificates of use and/or occupancy. The Co-Permittees use this juncture to assure satisfactory completion of all requirements in a project-specific WQMP or the conditions of approval for Other Development projects by requiring the applicant to demonstrate, where applicable, that:

- All structural BMPs have been constructed and installed in conformance with approved plans and specifications;
- A mechanism or agreement acceptable to the Co-Permittee has been executed for the long-term funding and implementation, operation, maintenance, repair, and/or replacement of BMPs;
- The applicant is prepared to implement all non-structural BMPs;
- An adequate number of copies of the project-specific WQMP, if applicable, are available onsite; and
- Industrial facilities subject to California's General Permit for Storm Water Discharges Associated with Industrial Activity as defined by Standard Industrial Classification (SIC) code provide proof of coverage by providing a copy of the Notice of Intent (NOI) submitted to the State Board and/or a copy of the notification of the issuance of a Waste Discharge Identification (WDID) Number.

BMPs for Development Projects and Other Development projects cannot be considered effective unless a mechanism is in place to provide for long-term reliability, which is achieved through proper implementation, operation, and maintenance. Therefore, once construction of a project is complete, assurance is required for the long-term implementation, operation and maintenance of BMPs, and most particularly for Treatment Control BMPs.

The responsibility for implementation, operation, and maintenance of BMPs may be with a private entity or a public agency (for example, a Permittee) under various arrangements and with various funding sources. The responsibility to provide for the long-term implementation, operation, and maintenance of BMPs associated with Development Projects or Other Development projects may:

- Remain with a private entity (property owner, home owners association, etc.); or
- Be transferred to a public entity (e.g., a city, county, special district, etc.) through dedication of the property; or
- Be transferred to a public entity, or another private party through a contract.

Following satisfactory inspection, the Permittee may accept structural BMPs within public right-of-ways, and may accept structural BMPs on land dedicated to public ownership. Upon acceptance, responsibility for operation and maintenance will transfer from the developer or contractor to the appropriate entity, including the funding mechanism identified in the approved final project-specific WQMP for Development Projects or the conditions of approval or building/grading permit conditions for Other Development projects.

If a property owner or a private entity retains or assumes responsibility for implementation, operation, and maintenance of BMPs, the Permittee require an agreement that can take the form of:

- A Covenant and Agreement recorded with the County Recorder,
- A Home Owners Association or Property Owners Association Covenants, Codes, and Restrictions,
- The formation of, or annexation to, a maintenance district or assessment district, or
- Other instrument sufficient to guarantee long-term implementation, operation, and maintenance of BMPs.

Examples of requirements for typical maintenance mechanisms and a sample of a Covenant and Agreement are provided in Appendix O (Riverside County Water Quality Management Plan for Urban Runoff, Exhibits E and F, respectively).

[41] "Development Projects" refers to "Priority Projects" as defined in Section F.2.b.1 of the SMR MS4 Permit or "New Development and Significant Redevelopment" as defined in Section VIII.B.1 of the SAR MS4 Permit.

6.5 TRAINING

6.5.1 Educational Program for Developers and Contractors

The Riverside County Water Quality Management Plan contains the legal, administrative, and technical information needed to acquaint developers and contractors with the requirements for post construction BMPs in Development Projects. It also provides information relevant and useful to Other Development projects. The Co-Permittees make the approved Riverside County Water Quality Management Plan for Urban Runoff available as part of the review process for project planning and permitting. The Permittees may also coordinate with the University Extension and other groups to provide training to the property owners, developers, builders, architectural and engineering firms, planning firms, etc.

6.5.2 Training Programs for Municipal Development Planning Staff

Co-Permittee staff responsible for implementing development planning requirements receive annual training regarding the following topics:

- Federal, state and local water quality laws and regulations applicable to development projects,
- The connection between land use decisions and short and long-term water quality impacts; and
- How impacts to receiving water quality resulting from development can be minimized via the WQMP process.
- TMDL requirements and appropriate post-construction BMPs to mitigate the impacts of development.

The Permittees have developed a PowerPoint presentation that can be provided to municipal development planning staff.

Co-Permittee staff responsible for conducting development planning may also attend other Permittee sponsored training, training sponsored by industry associations (e.g., Building Industry Association, American Society of Civil Engineers, etc.), the California Storm Water Quality Association, or training sponsored by other entities in lieu of Permittee sponsored training. The Permittees individually maintain a log of trained staff and type of training, and then include this information in the Annual Reports.

7.0 PRIVATE DEVELOPMENT CONSTRUCTION ACTIVITY

The initial construction site inspection program element was described in the Enforcement/Compliance Strategy (E/CS) as required by the 1996 SAR MS4 Permit. The construction site inspection program has been an effective element of the Riverside County DAMP. However, this program element has been revised to address the requirements of the Third-term MS4 Permits.

7.1 CONSTRUCTION SITE BMPS

The erosion control BMPs appropriate for use during construction are listed in Table 7-1 with cross references to the BMP designations used in the *2003 California Stormwater Best Management Practice Handbook, Construction*[42] and the Caltrans *Construction Site BMP Manual* (March 2003)[43]. Since BMP technology is constantly changing, the jurisdictional Permittee may consider other BMPs of equivalent or better performance on a case-by-case basis.

Santa Margarita Region Specific Elements

Each Permittee requires the use of a set of minimum BMPs that address pollution prevention by construction site owners, developers, contractors and other responsible parties, as appropriate, through standard notes that must appear on grading plans as described in Section 6.4.7.1 of the DAMP. Each Permittee also requires the implementation of additional controls as needed for construction sites tributary to CWA Section 303(d) listed water bodies impaired for sediment. In addition, the Permittees require construction sites discharging directly to receiving waters within Environmentally Sensitive Areas (ESAs) to implement additional controls as necessary to comply with the Third-term SMR MS4 Permit.

[42] California Stormwater Quality Association. January 2003. http://www.cabmphandbooks.com/ or CASQA, P.O. Box 2105, Menlo Park, California, 94026-2105.

[43] California Department of Transportation. March 2003. http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf

Table 7-1. Construction Site BMPs

BMP Name	California BMP Handbook – Construction	Caltrans Construction Site BMP Manual	Included in USEPA Construction Site Menu of BMPs
Stabilize Exposed Soils			
Chemical Stabilization (Soil Binders)	EC-5	SS-5	X
Polyacrylamide	EC-13		
Mulching			
Hydraulic Mulch	EC-3	SS-3	X
Straw Mulch	EC-6	SS-6	X
Wood Mulching	EC-8	SS-8	X
Permanent Seeding			X
Sodding			X
Soil Roughening			X
Temporary Seeding/Hydroseeding	EC-4	SS-4	
Protect Steep Slopes			
Earth Dikes/Drainage Swales/Lined Ditches	EC-9	SS-9	
Fiber Roll	SE-5	SC-5	
Geotextiles	EC-7	SS-7	X
Gradient Terraces			X
Soil Retention			X
Straw Bale Barrier	SE-9	SC-9	
Temporary Slope Drain	EC-11	SS-11	X
Protect Waterways			
Check Dams	SE-4	SC-4	X
Outlet Protection/Velocity Dissipation Devices	EC-10	SS-10	
Streambank Stabilization	EC-12	SS-12	
Temporary Stream Crossings	NS-4	NS-4	X
Vegetated Buffer			X
Phase Construction			
Construction Sequencing (Scheduling)	EC-1	SS-1	X
Dust Control	WE-1	WE-1	X
Preserve Site Condition			
Entrance/Outlet Tire Wash	TC-3	TC-3	
Preservation of Existing Vegetation	EC-2	SS-2	
Stabilized Construction Entrance	TC-1	TC-1	
Stabilized Construction Roadway	TC-2	TC-2	

7.2 INVENTORY DATABASE

Santa Ana Region Specific Elements

In conformance with Section IX.A.1 of the Third-term SAR MS4 Permit, each SAR Co-Permittee developed and maintains an inventory database (or databases) of construction sites 1-acre or larger for which they have issued a building or grading permit. Construction sites are included in the inventory regardless of whether the construction site is subject to the General Construction Activity Storm Water Permit or other individual construction storm water NPDES permits. In addition, New Development/Significant Redevelopment projects meeting the criteria defined in Section VIII.B.1 of the 2007 SAR MS4 Permit are also included in this database. These databases are updated with new projects added when the project is issued a building or grading permit or when the pre-construction meeting has occurred. Projects may be removed from the database when construction is completed and the project's building or grading permit is closed. At a minimum, the Co-Permittees' databases include the following project information:

- Facility/Project name,
- Facility/Project address,
- Tract number(s) or Assessor Parcel Number (APN),
- Watershed,
- Project type,
- Project priority,
- Number of inspections performed,
- Site size,
- WDID#,
- Grading Permit #,
- Other permits,
- Developer's information,
- Site contact information, and
- Enforcement status.

Santa Margarita Region Specific Elements

Annually, prior to the rainy season, each SMR Co-Permittee updates their inventory of construction sites within their jurisdiction regardless of site size or ownership.

7.3 CONSTRUCTION SITE INSPECTION

Santa Ana Region Specific Elements

Each construction site/project included in a Co-Permittee's inventory database is assigned a priority of High, Medium, or Low to reflect the potential for impairing Receiving Water quality. In order to standardize prioritization the Permittees developed a matrix for the relationship between priority ratings and Receiving Water pollution threat. This Construction Site Prioritization Matrix is presented in Table 7-2.

After each inspection, the priority assigned to the construction site/project is re-assessed based upon the prioritization matrix shown in Table 7-2 and the inspection frequency is determined. This information is used to update the construction site/project database. As shown in Table 7-2, the minimal inspection frequency is:

- Once every two weeks for construction sites designated as High priority.
- Once a month for construction sites designated as Medium priority.
- Once during the rainy season (October 1 through May 31) for construction sites designated as Low priority.
- Within two weeks for follow-up inspections related to non-compliance with the SAR Co-Permittee's storm water ordinance.

However, the MS4 Permit does not require the Co-Permittees to inspect construction sites already inspected by Regional Board staff. To facilitate this, Regional Board staff will post a list of construction sites/projects inspected on their website (http://www.waterboards.ca.gov/santaana/html/regional_ind_con_db.html/santaana/html/regional_ind_con_db.html) or make this information available to the Co-Permittees by other pre-arranged means.

Table 7-2. Construction Site Prioritization Matrix

Priority	Supporting Criteria [a]	Wet Season[b] Inspection Frequency
High	Project Size Sites that disturb an area greater than 50 acres (initial inventory) Project Location Sites that disturb an area greater than one(1) acre and are located adjacent to, within 200 feet, of an identified impaired water body within the Permit Area (initial inventory) Sites that disturb an area greater than one (1) acre and directly discharge to an identified water body within the Permit Area (initial inventory) Soil Erosion Potential Hillside sites that disturb an area greater than five acres History of Compliance Sites that disturb an area greater than one (1) acre with a low-range (0-50%) compliance with respective city/County NPDES site inspection/verification checklists	Once every two weeks
Medium	History of Compliance Sites that received repeated verbal notification of non-compliance with respective city/County NPDES site inspection/verification checklists	Once each month
Low	History of Compliance Sites that are in compliance with respective city/County NPDES site inspection/verification checklists Sites that disturb an area of one (1) acre or greater	Once

Notes:

[a] Prioritization factors listed in Third-term SAR MS4 Permit §IX.A.2 include soil erosion potential, project size, proximity and sensitivity to Receiving Waters, and history of compliance. §IX.A.3 of the Third-term SAR MS4 Permit describes the minimum inspection requirements, which are reflected in inspection checklists.

[b] Wet season: October 1st to May 31st

[c] Dry season: June 1st to September 30th

Santa Margarita Region Specific Elements

During the wet season, the Permittees inspect the following construction sites at least every two weeks:

1) All sites 50 acres or more in size and grading will occur during the wet season;

2) All sites 5 acres or more, and tributary to a CWA section 303(d) water body impaired for sediment or within or directly adjacent to or discharging directly to a receiving water within ESA; and

3) Other sites determined by the Permittee or the San Diego Regional Board as a significant threat to water quality. In evaluating threat to water quality, the following factors are considered: (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; and (7) any other relevant factors.

However, any site meeting these criteria may be inspected on a monthly basis if the Permittee certifies in a written statement to the San Diego Regional Board that the Permittee has a record of construction site's WDID number documenting the site's coverage under the General Construction Permit, the Permittee has reviewed the construction site's SWPPP and finds it to be in compliance with local ordinances, permits and plans, and the Permittee finds that the SWPPP is being properly implemented on site.

The Permittees inspect all construction sites that do not meet these criteria but encompass 1 acre or more of soil disturbance at least three times during the wet season. Construction sites less than 1 acre in size are inspected on an as-needed basis. All construction sites are inspected as needed during the dry season.

Conducting Inspections

At a minimum, the following items are addressed during construction site inspections:

- For projects of one acre or more, verify that an NOI has been submitted to the State Board or to the Santa Ana Regional Board (projects in the San Jacinto watershed). Verification is typically made by reviewing a copy of the NOI Receipt letter from the State Board showing the Waste Discharge Identification (WDID) Number issued for the site.
- For projects of one acre or more, verify that a SWPPP is on-site.
- Confirm compliance with the Co-Permittee's storm water ordinance.
- Check for poorly managed authorized non-storm water discharges or evidence of unauthorized non-storm water discharges that may be potential illicit connections or illegal discharges to a MS4.

Some Co-Permittees have chosen to document this construction site inspection information on a separate form, while other Co-Permittees have chosen to incorporate this information into existing inspection forms. An example construction site inspection form is shown in Figure 7-1. Based on the inspection findings, the Permittees implement follow-up actions as necessary to comply with the requirements of the Third-term MS4 Permits.

7.4 ENFORCEMENT

If determined during a routine inspection or an inspection in response to a complaint that a site/project is non-compliant with the Co-Permittee's storm water or erosion control ordinance, the Co-Permittee begins enforcement procedures as described in Section 3.4.2 of the DAMP. As described in Section 3.4 (Legal Authority and Enforcement), the severity of the violation is based on various factors. After considering the various factors, the Co-Permittee determines the level of enforcement required consistent with the enforcement levels described in Table 3-3.

7.5 REGIONAL BOARD NOTIFICATION REQUIREMENTS

The Co-Permittees notify the respective Regional Board when construction site inspectors, other Co-Permittee staff, or third parties report observing potential non-compliance with the Construction Activity Permits of a non-Emergency Situation nature. Such notifications are made by telephone or email within 2 working days of receiving notice from its staff or a third party. Examples of non-compliance of a non-Emergency Situation nature are a site that cannot demonstrate coverage under the applicable Construction Activity Permit, a site that does not have a SWPPP available, or a site with BMPs that are not properly maintained. The Regional Board staff will then determine if an inspection and enforcement action for the Construction Activity Permit is appropriate. Upon providing notification to the Regional Board, no further action is taken by Co-Permittee staff with respect to enforcement of the Construction Activity Permits. However, the Co-Permittee continues with progressive enforcement of its ordinances and permits at the site as described in Section 3.4.2 of the DAMP. Notifications regarding Emergency Situations are described in Section 4.3.

Figure 7-1. Example Construction Site Inspection Form

Insert Co-Permittee logo here

Construction Activity Compliance Inspection Notice

Public Works Department and/or Division
Insert Co-Permittee address here, CA

Date:

TRACT/PARCEL #:	WDID#:	WEATHER:	SITE INSPECTION PRIORITY LEVEL: ☐ HIGH ☐ MEDIUM ☐ LOW
APN:	GRADING PERMIT #:	SIZE/DISTURBED ACREAGE:	OFFICE USE: ☐--PAID ☐--INVOICE

SITE NAME AND ADDRESS:	PROPERTY OWNER AND MAILING ADDRESS (IF DIFFERENT):

CROSS STREETS:	INSPECTED BY:	PHONE #:	DATE FOR REINSPECTION:

FUTURE SITE USAGE: ☐ RESIDENTIAL ☐ INDUSTRIAL ☐ COMMERCIAL ☐ MIXED-USE	POST-CONSTRUCTION BMPs ON-SITE: ☐ YES ☐ NO NOTES-

NOTICE: The [Insert Co-Permittee Name] performs a construction site inspection to determine if the site is in compliance or not in compliance with the [Insert Co-Permittee Name] Stormwater Ordinance, local permits, regulations, and codes.

1. **PERMITS: (MS4 Permit Ref: Section IX.A.3.a)**
   - ☐ Copy of NOI located at the project site?
   - ☐ Copy of WDID located at the project site?
   - ☐ Copy of [Insert Co-Permittee Name] permit at project site?

2. STORM WATER POLLUTION PREVENTION PLAN (SWPPP): (MS4 Permit Ref: Section IX.A.3.b)
   - ☐ Copy of SWPPP located at the project site? If not, Regional Board must be notified.

3. BEST MANAGEMENT PRACTICES (BMPS):
   - ☐ BMPs installed in conformance with local permits and [Insert Co-Permittee Name] Stormwater Ordinance, i.e. perimeter controls, storm drain inlet protection, etc?
   - ☐ BMPs in place for the various subcontractor trades, i.e. PCC cleanout, material storage, waste storage, etc?
   - ☐ Project site BMPs effective?
   - ☐ Effective combination of erosion and sediment controls on site?

4. EROSION CONTROL:
   - ☐ No evidence of erosion present on manufactured and/or denuded slopes?
   - ☐ No evidence of rill or gully erosion present?
   - ☐ Erosion control BMPs installed in conformance with local permits and [Insert Co-Permittee Name] Stormwater Ordinance?

5. SEDIMENT CONTROL:
   - ☐ No evidence of sediment outside the permit area or present on the site in an area that requires protection?
   - ☐ No evidence of construction site sediment on City-maintained streets, downstream storm drains and/or drainage ways?
   - ☐ No evidence of "Track-out" observed on surface streets adjoining the project site?
   - ☐ Sediment controls installed and maintained in conformance with local permits and [Insert Co-Permittee Name] Stormwater Ordinance?

6. ILLEGAL/ILLICIT DISCHARGES:
   - ☐ No evidence that structural controls are breached or failed under storm events of minor intensity?
   - ☐ No evidence that active non-storm water discharges or potential illicit connections or illegal discharges to the streets or storm drains?

VIOLATIONS:	
☐ Verbal warning:	☐ Written warning: (attach copy)
☐ NOV: (attach copy)	☐ Stop Work: (attach copy)
☐ Other:	

ADDITIONAL:

RECEIVED BY:	NAME/SITE CONTACT (PRINT):	24-HOUR PHONE:
DATE:	VIOLATIONS: ☐ CORRECTED ☐ NOT CORRECTED	PAGE _____ OF _____
REGIONAL BOARD NOTFICIATION: ☐ YES ☐ NO	DATE: TIME:	CONTACT:

7.6 REPORTING REQUIREMENTS

For purposes of annual reporting, the Permittees developed the standardized spreadsheet shown in Figure 7-2 for listing construction sites within their jurisdiction and the associated inspection and enforcement information.

7.7 TRAINING REQUIREMENTS

Co-Permittee staff responsible for conducting construction site inspections receive annual training regarding the following topics:

- A summary of federal, state and local regulations (including the General Permit-Construction and the San Jacinto Watershed Construction Activities Permit, Third-Term MS4 Permits, the DAMP and the WQMP) that impact construction activities;
- The impacts of construction activities on water quality;
- Proper selection and maintenance of BMPs necessary to meet requirements of Permittee storm water ordinances and other local ordinances, resolutions and codes related to the protection of water quality;
- Local enforcement and compliance strategy/policy for construction sites;
- How to identify construction sites subject to the General Permit-Construction or the San Jacinto Watershed Construction Activities Permit and what actions to take if the appropriate permit has not been obtained by the construction site owner; and
- How to provide guidance to contractors on proper selection, implementation and maintenance of construction BMPs and compliance with the requirements of the Storm Water Ordinance during site inspections.
- TMDL requirements and appropriate BMPs to mitigate the impacts of construction activities.

This annual training for construction site inspectors is conducted prior to October 1, the start of the rainy season. The Permittees individually maintain a log of trained staff and report training in their annual reports.

Santa Ana Region Specific Elements

The Co-Permittees ensure that newly hired municipal staff or transferred municipal staff receive formal training within 6 months of beginning their inspection duties. When planning formal classroom training related to construction site inspectors, the Co-Permittees will notify and coordinate with Regional Board staff. Co-Permittee staff responsible for conducting construction site inspections may also attend training sponsored by industry associations (e.g., Building Industry Association, International Erosion Control Association, American Society of Civil Engineers, etc.), the California Storm Water Quality Association, or other entities in lieu of Permittee sponsored training.

Santa Margarita Region Specific Elements

Permittees are also required to implement a program to ensure that project applicants, contractors, developers, property owners and other responsible parties have an understanding of the topics identified above for Co-Permittee staff responsible for conducting construction site inspections. This is generally accomplished by the distribution of public education materials to responsible parties and by reviewing project site compliance deficiencies and necessary corrective actions with responsible parties during the inspection process. The Permittees may also coordinate with university extension programs and industry associations (e.g., Building Industry Association, International Erosion Control Association, American Society of Civil Engineers, etc.), the California Storm Water Quality Association, or other entities in lieu of Permittee sponsored training.

Figure 7-2. Standardized Spreadsheet for Co-Permittee Construction Site Inspections

PROJECT GENERAL INFORMATION												MUNICIPAL PERMITS See Note C.		DEVELOPER INFORMATION						SITE CONTACT INFORMATION		ENFORCEMENT STATUS See Note D.					
	Project Location															Mailing Address											
Facility Name (dba) See Note A.	Street Address	Cross Street	City	Zip	Tract Nos. or Assessor Parcel Nos. See Note B.	Watershed	Project Type	Project Priority	No. of Stormwater Inspections	Site Size	WDID No. (General Permit)	Grading Permit No.(s)	Other Permits Specify: Building, Encroachment, Right-of-Way, etc.	Name	Contact Name	Street Address	City	Zip	Phone Number	Name (24 Hour)	Phone Number (24 Hour)	Satisfactory	Verbal Warning	Written Warning	Notice of Violation	Stop Work Order	Referred to RWQCB

Notes:

A. Name of project, developer, or planning area. The facility name as used by Regional Boards can be obtained from the State Water Resources Control Board Construction General Permit database (Column titled "Facility_SiteName") or from a copy of the applicant's Notice of Intent.

B. Provide Tract Numbers or Assessor Parcel Nos. as appropriate to identify Facility (Project).

C. Enter the Municipal Permit Nos. as appropriate to identify Facility (Project).

D. Enter the number of each type of enforcement action for each Facility (Project).

8.0 INDUSTRIAL AND COMMERCIAL SOURCES

The initial industrial and commercial sources program element was described in the Enforcement/Compliance Strategy as required by the 1996 SAR MS4 Permit. The program included implementation of the Compliance Assistance Program (CAP), which made use of existing site County Department of Environmental Health inspections. As the responsible Certified Unified Program Agency (CUPA) in Riverside County, the County Department of Environmental Health was responsible for regularly inspecting all sites within the County that handle hazardous waste. There are approximately 5,500 facilities with hazardous materials permits, of which 2,300 are inspected annually. The remaining facilities are inspected at least every other year. The County Department of Environmental Health also inspects all food services restaurants (approximately 6,500 facilities) within the County at least annually. The Cities of Corona and Riverside also implemented a separate storm water inspection program as part of their Municipal Wastewater Pre-Treatment inspection program.

Under the CAP, County Department of Environmental Health inspectors added a storm water compliance survey to their regular inspection process. Completed surveys are forwarded to the appropriate Permittees for their records, review and further action, if necessary. The CAP and Municipal Wastewater Pre-Treatment industrial and commercial sources program has been an effective element of the DAMP.

This program element was revised to address the requirements of the Third-term MS4 Permits, including an expansion of the commercial businesses not covered by the CAP and Municipal Wastewater Pre-Treatment inspection programs. The expansion has required some Permittees to hire inspectors to address those facilities not currently covered by the CAP or the Municipal Wastewater Pre-Treatment Program. In addition, the Third-Term MS4 Permits required inventories/databases of facilities, prioritization of industrial and commercial sources relative to the potential to impact water quality, and specified inspection frequencies based upon facility priority. The revised industrial and commercial sources program continues to have both regional and local jurisdiction components. However, the Permittees will review the effectiveness of these programs annually and make additional program modifications as necessary.

8.1 INDUSTRIAL/COMMERCIAL FACILITY DATABASE

Each Co-Permittee has developed and maintains an inventory database (or databases) of industrial and commercial facilities within their respective jurisdictions. Facilities are included in these inventories regardless of whether the facility is subject to the General Industrial Activities Storm Water Permit, or other individual NPDES permits issued by the State or Regional Boards. Each Co-Permittee that presently has an existing local industrial inspection program (the cities of Corona and Riverside as to their respective POTW pre-treatment inspections and the County through the CAP) includes in their respective inventory information derived from existing compliance survey and inspection programs. Each Co-Permittee without an industrial/commercial facility inspection program includes in their inventory information from the CAP that is relevant to its jurisdiction and may include information derived from other agencies providing services within its jurisdiction, including, but not limited to, the appropriate Fire Department, health departments, and POTW servicing the Permit Area.

Co-Permittee maintenance of the facility inventory/database includes regularly updating the inventory/database for information obtained during facility inspections or from any of the following sources: conditional use permits, plot plans, building permits, business licenses, occupancy permits, hazardous materials permits, and hazardous waste generator permits are approved for the development of a new industrial facility, additional facilities are identified through the CAP, and as compliance surveys and inspections are completed and industrial facilities are identified. The Permittees existing inventory/ database of industrial and commercial facilities were updated to include the following categories:

- Mobile automobile or other vehicle washing (base of operations),
- Mobile carpet, drape or furniture cleaning (base of operations),
- Nurseries and greenhouses,
- Landscape and hardscape installation (base of operations), and
- Other commercial sites/sources that the SAR Co-Permittee determines may contribute a significant pollutant load to the MS4.

Santa Ana Region Specific Elements

Mobile high pressure or steam cleaning (base of operations)

Santa Margarita Region Specific Element

Many of these facility types are covered by the CAP within each Permittees jurisdiction. Each Permittee has reviewed the CAP site list and supplemented their local inspection programs to include any of the following facility types not covered by the CAP inspections:

- Automobile, airplane, and boat mechanical repair, maintenance, fueling, or cleaning
- Equipment repair, maintenance, fueling, or cleaning
- Automobile and other vehicle body repair or painting
- Automobile (or other vehicle) parking lots and storage facilities
- Retail or wholesale fueling;
- Pest control services (base of operations)
- Eating or drinking establishments
- Concrete mixing or cutting (base of operations)
- Painting and coating (base of operations)
- Golf courses, parks, and other recreational facilities
- Cemeteries
- Pool and fountain cleaning (base of operations)
- Port-a-Potty servicing (base of operations)

- Facilities subject to the General Permit-Industrial[44]
- Closed municipal landfills
- Facilities subject to SARA Title III
- Facilities tributary to a Receiving Water included on the 303(d) List of impaired waterbodies, where the facility generates pollutants causing the impairment(s)

At a minimum, the Co-Permittees' databases include the following information:

- Facility name,
- Facility street address,
- City,
- Zip code,
- Standard Industrial Classification (SIC) Codes,

Santa Ana Region Specific Element

- Mailing address (if different),
- Location reference (such as, geographic coordinates, cross streets, etc.),
- Facility contact
- Facility contact phone number,
- WDID Number associated with the General Permit-Industrial (if any)
- Other NPDES permit or Waste Discharge Requirements,
- Assessor's parcel number, and
- Site size.

Santa Margarita Region Specific Element

Narrative description that best reflects the principal products or services provided by each facility.

8.2 SMR MINIMUM BMPS FOR INDUSTRIAL/COMMERCIAL FACILITIES

In their Individual SWMP each SMR Co-Permittee has designated minimum BMPs for the industrial and commercial facilities within their jurisdiction to reduce the discharge of pollutants to the MEP. For those industrial and commercial facilities that are discharging directly to Receiving Waters that are included in the 303(d) List as impaired, each SMR Co-Permittee has designated additional BMPs as necessary to specifically target the pollutants contributing to the identified impairment. For those industrial and commercial facilities that are within, directly adjacent to, or discharging directly to ESAs, each SMR Co-

[44] See Attachment 1 to the General Permit-Industrial which can be reviewed or downloaded from the following website: http://www.waterboards.ca.gov/stormwtr/docs/induspmt.pdf.

Permittee has designated additional BMPs as necessary to protect the ESAs. Each SMR Co-Permittee's designated additional BMPs are reflected in their Individual SWMP.

The Co-Permittees have notified the industrial and commercial facilities of the minimum BMPs and additional BMPs (when appropriate) applicable to facilities within their jurisdiction. This notification identified and included a description of the Co-Permittee's storm water ordinance. Where implementation of the minimum BMPs and the additional BMPs are identified as being insufficient to achieve compliance with the SMR MS4 Permit, the Co-Permittees require the implementation of additional site-specific BMPs.

8.3 INDUSTRIAL/COMMERCIAL FACILITY PRIORITIZATION AND INSPECTION FREQUENCY

For each facility/business included in a Permittee's industrial and commercial inventory, the Permittees have assigned a priority of High, Medium, or Low to reflect the facility's/business's potential for contributing to the impairment of Receiving Water quality. In order to develop a consistent prioritization standard, the Permittees developed a matrix for the relationship between priority ratings (High, Medium, and Low) and Receiving Water pollution threat. This Industrial and Commercial Facility/Business Prioritization Matrix is presented in Table 8-1.

Table 8-1. Industrial and Commercial Facility/Business Prioritization Matrix

Priority	Inspection Frequency
High	Once a year
Medium	Once every two years
Low	Once during the Third-term Permit period

Criteria considered include types of industrial and commercial activities (SIC codes), materials or wastes used or stored outdoors, types of activities conducted outdoors, pollutant discharge potential, facility size, proximity and sensitivity of Receiving Waters, history of unauthorized non-storm water discharges, whether facility is subject to General Permit-Industrial, available facility-specific monitoring data, frequency of existing inspections based upon other California statutes or regulations, or local regulations, ordinances, or codes, and any relevant factors.

The initial priority assigned to a facility/business by the Permittees was based upon (1) completed survey forms from inspections conducted as part of the CAP, or (2) information provided in inspection reports completed as part of the Municipal Wastewater Pre-Treatment Inspection Programs (Cities of Corona and Riverside).

Santa Ana Region Specific Element

Within the SAR, at a minimum, a facility must be categorized as high priority if it is a facility subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 or if it is a facility with a high potential for or history of unauthorized non-storm water discharges.

8.4 INDUSTRIAL AND COMMERCIAL FACILITY INSPECTIONS

The Permittees have developed a mechanism to identify compliance of industrial and commercial facilities with local storm water ordinances and, where applicable, potential non-compliance with the General Permit-Industrial. There are two main components of this existing program: the Compliance Assistance Program and the local POTW inspection programs. When conducting facility/business inspections, at a minimum, the following are addressed:

- Verification of the type (or types) of industrial and/or commercial activities and facility SIC codes.
- Submittal of a NOI to comply with the General Permit-Industrial, if applicable based upon the facility's SIC code.
- Compliance with the local jurisdiction's storm water ordinance.
- Observation for non-storm water discharges, potential illicit connections, and illegal discharges to the MS4.
- Potential discharge of pollutants in Urban Runoff from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas.
- Implementation and maintenance of appropriate or minimum BMPs.
- Qualitative assessment of the effectiveness of the BMPs implemented.
- Education regarding storm water pollution prevention.

8.4.1 Compliance Assistance Program

Regionally, the County's Department of Environmental Health implements the Compliance Assistance Program (CAP) for oversight and inspection of industrial and commercial sources. This is the baseline program for the SAR and SMR. The inspections performed as part of the CAP are conducted at frequencies required by other regulatory programs. All Co-Permittees either implement the CAP or an equivalent industrial and commercial facility inspection program.

In April 2004, the District and the County's Department of Environmental Health executed an agreement that provides continued support for the area-wide CAP. The CAP involves a detailed storm water compliance survey for facilities that must secure a hazardous materials permit for storing, handling or generating such materials and for retail food facilities. Many types of industrial and commercial establishments are inspected by the County's Department of Environmental Health Hazardous Materials Management staff including those that conduct automobile mechanical repair, maintenance, fueling, or cleaning operations, automobile or other vehicle body repair or painting operations, and painting or coating operations. There are approximately 5,500 facilities having a hazardous materials permit of which approximately 2,300 are inspected annually and all facilities are inspected at least once during a two-year cycle. There are approximately 6,750 retail food facilities, all of which are inspected one to three times annually.

Blank copies of the forms used by the County's Department of Environmental Health when conducting these storm water compliance surveys are included in Appendix Q. Completed survey forms are forwarded to the District and then to the appropriate Co-Permittee. The respective jurisdiction's representative identifies those surveys that indicate non-compliance to initiate a follow-up inspection.

During the CAP surveys of the hazardous materials permit facilities the following minimum BMPs are verified:

- Hazardous waste/materials storage areas are clean, no signs of leakage, and protected from rainfall and runoff;
- Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and no signs of leakage from the trash bins;
- Aboveground tanks have been properly maintained including no signs of leakage, and secondary containment in good condition;
- Onsite storm drain inlets are protected from inappropriate non-storm water discharges;
- Oil/water separators are connected to sanitary sewer;
- Wash water from wash pads (steam cleaning or high pressure cleaning) is directed to the sanitary sewer and does not discharge to the MS4;
- Mop bucket wash water is discharged to sanitary sewer via clarifier;
- Parking lot areas are free of trash, debris, and fluids other than water; and
- Facility has coverage under the General Permit-Industrial, if appropriate.

These specific topics are addressed in questions 1-10 of the "Hazardous Waste/Hazardous Materials Facility Storm Water Compliance Survey" form included in Appendix Q.

The Third-term MS4 Permits required the Permittees to ensure that the storm water compliance surveys of restaurants are conducted. During the CAP restaurant surveys the following minimum BMPs are verified:

- Oil and grease wastes are not discharged onto a parking lot, street or adjacent catch basin;
- Trash bin areas are clean, the bin lids are closed, the bins are not filled with liquid, and the bins have not been washed out into the MS4;
- Floor mats, filters and garbage containers are not washed in adjacent parking lots, alleys, sidewalks, or streets and that no wash water is discharged to MS4s; and
- Parking lot areas are cleaned by sweeping, not by hosing down, and that the facility operator uses dry methods for spill cleanup.

These specific topics are addressed in questions 1-8 of the "Food Facility Storm Water Compliance Survey" form included in Appendix Q.

The CAP includes educational outreach to the inspected facilities and completion of a detailed storm water compliance survey. In conducting a facility inspection, if it appears that the facility may be required to have coverage under the General Permit-Industrial and the facility operator indicated that an SWPPP is not onsite, the inspector provides the facility operator with an informational sheet on the requirements of the General Permit-Industrial and makes a notes on the compliance survey that the SWPPP was not available onsite. Each Permittee also verifies the SIC codes of each facility to ensure that the General Permit-Industrial is obtained where necessary.

8.4.2 Municipal Wastewater Pre-Treatment Inspection Programs

The Cities of Corona and Riverside, which operate publicly owned treatment works (POTWs), in combination conduct annually on average, approximately 4,400 wastewater pre-treatment inspections on a variety of industrial and commercial establishments, including, but not limited to, retail food establishments, car washes, and carpet, drape & furniture cleaning establishments. When conditions are observed during these wastewater pre-treatment inspections that appear to be a violation of either the General Permit- Industrial or other permit issued by the Regional Board (for example, an individual NPDES permit or Waste Discharge Requirements), the Cities of Corona and Riverside notify Santa Ana Regional Board staff.

During commercial or industrial facility inspections, the inspectors document whether the facility:

- Appears to be in compliance with local storm water ordinances;
- If applicable, has submitted an NOI to comply with the General Permit-Industrial; and
- Appears to have poorly managed authorized non-storm water discharges or evidence of unauthorized non-storm water discharges, which may be illicit connections or illegal discharges to the MS4.

This information is documented on a separate report or included on an inspection form. Inspections resulting in enforcement action are referred to the appropriate jurisdictional entity.

8.4.3 County Business License Inspection Program

The Riverside County Department of Building and Safety has been tasked with developing a pilot project to establish a stand alone Storm Water Compliance Inspection and Enforcement Program (CIEP) for industrial/commercial facilities in the unincorporated areas of the Count Ordinance 857 (Business Registration and Licensing) was adopted on September 12, 2006 by the County Board of Supervisors and provides the basis for registering all businesses that are within the unincorporated areas of the County. Once a database has been established and businesses are registered, inspections will occur to determine the compliance status of the registrants with the County's Storm Water Ordinance. Businesses that are determined to have a potential impact on the requirements of the MS4 Permit will be prioritized and inspected based upon a yet-to-be-defined compliance inspection schedule. The CIEP will be phased in over time with the initial inspections to start sometime in fiscal year 2007-2008. As the CIEP is implemented, the CAP will diminish except in the incorporated cities that rely on the CAP to meet their inspection requirements or until another compliance inspection option becomes available.

8.5 ENFORCEMENT

If during a routine inspection or an inspection in response to a complaint, an inspector observes that a business/facility is non-compliant with the Co-Permittee's storm water ordinance (including the prohibition of non-exempt non-storm water discharges or minimum BMPs); the Co-Permittee begins enforcement procedures. As described in Section 3.4 (Legal Authority and Enforcement), the severity of the violation is based on various factors. After considering the various factors, the Co-Permittee determines the level of enforcement that is required consistent with the enforcement levels described in Table 3-3.

8.6 REGIONAL BOARD NOTIFICATION REQUIREMENTS

The Permittees notify the Regional Board when inspectors, other Permittee staff, or third parties report observing potential non-compliance of a non-Emergency Situation nature with the General Permit-Industrial or other permits issued by the State Board or Regional Board. Such notifications are made by telephone or email within 2 working days of receiving notice from its staff or a third party. Examples of non-compliance of a non-Emergency Situation nature are a facility that cannot demonstrate coverage under the General Permit-Industrial when it is apparent that it should have coverage, a facility that has coverage under the General Permit-Industrial but does not have a SWPPP available on-site, or a facility that is not properly implementing or maintaining BMPs. The Regional Board staff will then determine if an inspection and enforcement action is appropriate. Upon providing notification to the Regional Board, Permittee staff take no further action with respect to enforcement of the General Permit-Industrial. However, the Permittee continues with progressive enforcement of its ordinances at the site as described in Section 3.4.2 of the DAMP.

Notifications regarding Emergency Situations are described in Section 4.3.

8.7 INVENTORY AND REPORTING

Santa Ana Region Specific Element

For purposes of annual reporting, the Permittees developed a standardized spreadsheet for inventorying industrial and commercial facilities/businesses within their jurisdiction and the associated inspection and enforcement information. That standardized spreadsheet is shown in Figure 8-1.

Santa Margarita Specific Element

Each Permittee inventories industrial and commercial facilities/businesses within their jurisdiction on a spreadsheet similar to the one in Figure 8-1 and maintains it in their Individual SWMP. Each Permittee also reports a list of industrial facilities that may require coverage under the General Industrial Permit, and for which a NOI has not been filed in their annual reports. The annually reported list of non-filers will include name, address, and SIC code(s) of the facility.

8.8 INDUSTRIAL/COMMERCIAL FACILITY INSPECTOR TRAINING

Co-Permittee staff and contractor personnel responsible for conducting industrial/commercial facility inspections or follow-up inspections receive annual training regarding the following topics:

- Selection, implementation, and maintenance of appropriate or minimum BMPs for industrial or commercial facilities,
- The General Permit-Industrial and NOI requirements,
- The local jurisdiction's Storm Water Ordinance and other local jurisdiction resolutions and codes related to protection of water quality,
- The local jurisdiction's enforcement and compliance strategy/policy for industrial commercial facilities
- The Third-term MS4 Permits and the DAMP, and
- How to provide guidance to facility operators on proper selection, implementation and maintenance of industrial/commercial BMPs and compliance with the requirements of the Storm Water Ordinance during site inspections.
- TMDL requirements and appropriate BMPs to mitigate the impacts of industrial and commercial facilities.

Santa Ana Region Specific Element

The Co-Permittees ensure that newly hired municipal staff or transferred municipal staff receive formal training within 6 months of beginning their inspection duties. Also, when planning formal classroom training related to conducting inspections of industrial or commercial facilities, the Co-Permittees notify and coordinate with Regional Board staff. Co-Permittee staff responsible for conducting industrial or commercial facility inspections may also attend training sponsored by industry associations (e.g., American Society of Civil Engineers, American Public Works Association, etc.), the California Storm Water Quality Association, other area-wide MS4 permittees, or other entities in lieu of Permittee sponsored training. The Permittees individually maintain a log of trained staff and report training in their annual reports.

Figure 8-1. Standardized Spreadsheet for Co-Permittee Industrial and Commercial Facility Inventory and Inspections

FACILITY GENERAL INFORMATION									MUNICIPAL PERMITS	FACILITY CONTACT INFORMATION					INSPECTION / ENFORCEMENT STATUS (See Note B.)						
	Facility Location											Mailing Address (if different from street address)									
Facility Name (dba) See Note A.	Street Address	Cross Street	City	Zip	Watershed	Facility SIC Code	Facility Site Size	WDID No. (General Permit)	Business License, Wastewater Permit, etc. (if applicable)	Contact Name	Contact Phone Number	Street Address	City	Zip	Number of Stormwater Inspections	Satisfactory	Verbal Warning	Written Warning	Notice of Violation	Cease & Desist Order	Referred to RWQCB

Notes:
A. Name of facility. If the facility is covered by the General Permit for Stormwater Discharges Associated with Industrial Activity, the facility name as used by Regional Boards can be obtained from the State Water Resources Control Board Industrial General Permit database (Column titled "Facility_SiteName") or from a copy of the applicant's Notice of Intent.
B. Enter the number of inspections and the number of each type of enforcement action for each Facility.

9.0 RESIDENTIAL SOURCES

The Residential Sources program element is applicable only to the SMR.

9.1 HIGH PRIORITY RESIDENTIAL ACTIVITIES

Each SMR Co-Permittee has identified for its own jurisdiction the high priority residential activities that it believes may be contributing a significant pollutant load to its MS4. The residential activities that have been identified as high priority by each SMR Co-Permittee's are reflected in the Individual SWMPs. In identifying their high priority residential activities, the SMR Co-Permittees considered the following activities:

- Automobile repair and maintenance
- Automobile washing
- Automobile parking
- Home and garden care activities and product use (pesticides, herbicides, and fertilizers)
- Disposal of household hazardous waste
- Disposal of pet waste
- Disposal of green waste

9.2 MINIMUM BMPS FOR RESIDENTIAL ACTIVITIES

For each of the high priority residential activities identified for their jurisdiction, the Co-Permittees have designated a set of minimum BMPs to reduce the discharge of pollutants from these activities to the MEP. These designated minimum BMPs for high priority residential activities are identified in each Co-Permittee's Individual SWMP. The proposed Minimum BMPs are consistent with the public education programs targeting residential activities in Section 10 of the DAMP.

For those residential areas that are tributary to Receiving Waters that are included in the 303(d) List as impaired, each Co-Permittee has designated additional BMPs as necessary to specifically target the pollutants contributing to the identified impairment. For those residential areas that are within, directly adjacent to, or discharging directly to Environmentally Sensitive Areas (ESAs), each Co-Permittee has designated additional BMPs as necessary to protect the ESAs. Each Co-Permittee's designated additional BMPs are reflected in their Individual SWMP.

The Co-Permittees have notified the residents of the minimum BMPs and additional BMPs (when appropriate) applicable to their residences though the Public Education program. This notification identified and included a description of the Co-Permittee's storm water ordinance.

9.3 ENFORCEMENT

If during an inspection in response to a complaint, an inspector observes that a residence is non-compliant with the local jurisdiction's storm water ordinance (including the prohibition of non-exempt non-storm

water discharges); the Co-Permittee begins enforcement procedures. As described in Section 3.4 (Legal Authority and Enforcement), the severity of the violation is based on various factors. After considering the various factors, the Co-Permittee determines the level of enforcement that is required consistent with the enforcement levels described in Table 3-3.

10.0 PUBLIC EDUCATION AND OUTREACH

10.1 INTRODUCTION

Public education is an essential part of a municipal storm water program. Developing programs to increase public awareness and to involve the public can be an effective method for controlling pollution associated with Urban Runoff. Emphasizing the relevant impact of Urban Runoff to each particular target audience increases the likelihood that the messages will be noticed and that the audience will support and participate in program implementation. The Permittees have developed a strong area-wide public education and outreach program.

To leverage finite resources, the public education program has frequently partnered with various entities (Riverside County's Waste Management Department, Western Riverside Council of Governments, Los Angeles County Department of Public Works, Riverside Corona Resource Conservation District, and the California Conservation Corp, etc.) to promote conservation, pollution prevention and environmental awareness. The education program also expands outreach opportunities by collaborating with entities such as Riverside County's Agricultural Commissioner and University California Cooperative Extension to promote proper use of pesticides and herbicides to specific target groups such as pesticide applicators and home gardeners.

The public education program developed an Internet website that provides information to residents and businesses about the problem of storm water pollution and offers simple storm water pollution prevention activities. The website also provides materials order form for all educational materials. The website also has a tracking mechanism for the number of queries. The website address is http://www.floodcontrol.co.riverside.ca.us/stormwater/.

10.2 MS4 PERMIT REQUIREMENTS

The Third-term MS4 Permits require the Permittees to continue and expand implementation of public information activities, and other appropriate outreach activities to facilitate the development and implementation of the Urban Runoff management program. In general, the Third-term MS4 Permits require the Permittees to meet the following goals:

- Incorporation of Public Involvement in the program development and implementation process.
- To continue to participate in joint outreach efforts to ensure that a consistent and effective message on Urban Runoff pollution prevention is brought to the public.
- To establish a Public Education Committee to oversee and guide the implementation of the public education program.
- Expand the existing public educational program to include a concentrated, business-specific element. This education program must include information to encourage commercial facility owners and/or operators to comply with the local jurisdiction's storm water ordinance and, where applicable, the General Permit-Industrial or other NPDES permit or Waste Discharge Requirements issued by the State Board, Santa Ana or San Diego Regional Board.

- To target residents, including businesses, commercial, and industrial establishments.
- To measurably increase the awareness of Urban Runoff issues.
- To develop targeted BMP guidance for specific pollutants and residential and business activities, including identification of actions to prevent sewage spills.
- To develop, implement and promote a 1-800 hotline for reporting clogged storm drains, faded or missing catch basin stencils, illegal dumping from residential, industrial, construction and commercial sites into public streets, storm drains and waterbodies, and providing general Urban Runoff and BMP information.

10.3 OBJECTIVES

The public education program element has established the following guiding objectives.

Outreach Objectives:

- Foster broad public awareness of water pollution concerns;
- Increase public acceptance of pollution prevention activities to curtail everyday human behaviors that contribute to water quality problems;
- Educate/inform the general public, regulators and key local government and state decision makers on Urban Runoff conditions in Riverside County;
- Promote stewardship of local water resources.

Pollution prevention based education BMPs are a major focus of the outreach program. The outreach program includes three categories: Public Behavior, Business Activity, and Potential Pollutants. Table 10-1 identifies typical audience and outreach programs for the three categories of the outreach program.

Table 10-1. Public Education and Outreach Methods

Category	Audience	Potential Outreach Methods
Public Behavior	Residents; General Public	• Pamphlets • Brochures • Radio • TV/Cable • Billboards • Utility Bill Inserts • Direct Mail • Newspaper Inserts • Advertisements • Community Events • Surveys • Community Presentations
	Students	• Classroom Presentations • Videos • Workbook Materials • Coloring Contests
	Home Gardeners	• Focused Brochures • Posters • Workshops • Newspaper Inserts
Business Activity	Commercial; Industrial	• Brochures • Posters • Site Inspections
	Mobile Operators (auto maintenance; vehicle washing; mobile carpet, drape and furniture cleaning; mobile steam cleaning)	• Brochures • Information at Public Permit Counters • Site Inspections (base of operations)
	Groundskeepers, landscape installation, nurseries, greenhouses	• Focused Brochures • Posters • Workshops • Newspaper Inserts • Site Inspections (base of operations)
	Architects; Developers	• Focused Brochures • Information at Public Permit Counters • WQMP and Supplement A Compliance reviews
	General Contractors; Construction Contractors	• Focused Brochures • Information at Public Permit Counters • New Development Guidelines • Site Inspections
Potential Pollutants	Users or Generators of fertilizers, pesticides, chemicals, and other pollutants	• Pamphlets • Brochures • Radio • TV/Cable • Utility Bill Inserts • Newspaper Inserts • Advertisements • Community Events • Community Presentations • Surveys • Licensing

Program Management Objectives:

- Encourage/educate/inform the regulators, Permittee personnel and other key local government and state decision makers on the purpose, use and requirements of the DAMP;
- Solicit public involvement in the development of local water quality programs;
- Focus on water quality issues specific to each Region.
- Coordinate public education efforts with adjacent storm water management programs and other related education programs to share resources, coordinate outreach efforts, and avoid costly duplication of effort; and
- Adapt public education programs and objectives, based on feedback surveys, monitoring data, and other methods, to address changing MS4 program needs and objectives.

Program management objectives serve as a management strategy for public education program implementation and development. These objectives are achieved through techniques such as local coordination meetings, participation in regional organizational efforts, advertising and outreach to adjacent programs. Table 10-2 identifies secondary objectives and typical techniques used to implement them.

Table 10-2. Public Management Methods

Category	Potential Outreach Methods
DAMP Education (Section 10.5.2.1)	• Management Steering Committee • Permittee Technical Committee • Personnel Training Programs • Coordination Meetings with other Departments/Agencies • Comments on CEQA Documents
Public Participation (Section 10.5.2.2)	• Information at Public Permit Counters • Public Workshops • Public Notifications • Posting Notices on Web Sites • Notifying Interested Parties
Program Coordination (Section 10.5.2.3)	• Participation in California Association of Stormwater Quality Agencies • Participation in various Watershed Management Efforts • Direct contact with adjacent or overlapping program managers (storm water, waste, others)
Adaptive Management (Section 10.5.2.4)	• Surveys of attendants of public fairs and events • Online web surveys • Review of monitoring data • Participation in surveys organized and coordinated by other local/state agencies • Staff Feedback • Incorporation of new state or federal guidelines or information

10.4 IMPLEMENTATION

10.4.1 Public Education Committee

The Permittees established the Public Education Committee to provide oversight and guidance for the implementation of the public education program. The Public Education Committee includes members of the Technical Committee and is chaired by the Public Education Coordinator. The Committee meets as needed but at least twice per year.

10.4.2 Program Framework

The Public Education Program is implemented at a countywide, regional and local level. The following subsections describe how the public education program is implemented at each level.

10.4.2.1 Countywide Level

As Principal Permittee for the County's three NPDES MS4 permits, the Riverside County Flood Control and Water Conservation District acts as administrator for the Public Education program and is responsible for developing a consistent and effective message on Urban Runoff pollution prevention throughout the County. This countywide element consists of developing a program image and core message, implementing countywide education programs, and coordinating countywide events and countywide interagency activities. The countywide program maintains a consistent look, theme and focus of the public education materials in each region. Countywide activities coordinated by the District include school education programs, distribution of public education materials to countywide inspection programs, participation in state organizations such as the CASQA, coordinating with other county agencies on various advertising campaigns, developing a look and theme for all public education materials and operation of the County's 24-hour 1-800 storm water pollution hotline.

10.4.2.2 Regional Level

The public education program is also tailored for each of the three regions in the County. This approach integrates elements of the countywide program while focusing on the specific geography and water quality issues of the area and allows the program to address the impacts of local activities on local water

quality. As Principal Permittee for each of the County's three MS4 permits, the District incorporates regional public education requirements established by each region's MS4 permit. The District also works with each region's Permittees to incorporate other regional public educational needs into that region's public education activities. Regional public education needs are established through formal and informal public education committees who discuss public education requirements and funding requirements each year. Regional public education programs may include participation in large community fairs, customized public education materials to address regional water quality issues, and participation in other local agencies regional public education efforts.

10.4.2.3 Local Level

Outside of the countywide and regional public education activities undertaken by the District on behalf of the Permittees, each Permittee may also undertake individual public education activities to address specific local needs or MS4 Permit requirements. These local activities may include distribution of public education information during construction site/business inspections; distribution of public education materials at front counters, local fairs and other community activities; and/or development of specific public education programs/materials to address specific needs.

10.5 PROGRAM COMPONENTS

The following subsections identify specific programs currently implemented by the Permittees to address program objectives. These programs are adaptively managed by the Permittees to meet the changing needs of the overall MS4 program based on changing regulations, water quality conditions, and feedback surveys.

10.5.1 Outreach Objectives

10.5.1.1 Public Behavior Education Program

The following programs are currently being implemented to foster broad public awareness of water pollution concerns; increase public acceptance of pollution prevention activities to curtail everyday human behaviors that contribute to water quality problems; and to promote stewardship of local water resources:

- **School Education Outreach**. Outreach to schoolchildren is the core to developing an environmental ethic in the next generation that can help prevent storm water pollution. The objective of this element of the public education program is implementation of a coordinated and comprehensive program that combines multiple elements – classroom or assembly presentations, teacher workshops and field events, and has the greatest potential to leave a lasting impression on school children. The program is implemented through contracts with the Riverside-Corona Resource Conservation District and the Mission Resource Conservation District. The program focuses on K through 6th grade. Videos on how to conduct an environmentally friendly car wash are passed out to secondary schools and secondary school level student organizations.
- **Brochures**. Brochures regarding illegal dumping, disposal of Household Hazardous Waste and Antifreeze, Batteries, Oil and Paint disposal information, lawn and garden maintenance

brochures, car washing, fertilizer, pesticide and household chemical use, pet care brochure, and home garden care guide.

- **Outreach Materials**. Various materials including oil containers, dust pans, pens, pencils, etc., based on availability and budget are provided free of charge to the public at community events to promote pollution prevention activities.
- **1-800 Hot Line**. The District operates a countywide 1-800 hotline number to encourage the public to report clogged storm drains, faded or missing catch basin stencils and illegal dumping from residential, industrial, construction and commercial sites into public streets, storm drains and waterbodies. This hotline is capable of receiving reports in both English and Spanish 24 hours/day seven days per week.
- **Website**. The District operates a website that provides information on how to report illegal dumping, clogged storm drains and lack of curb markers, as well as provides information on upcoming activities, opportunities for public participation in program development, and general information about Urban Runoff pollution prevention techniques. It also provides information for kids and teachers as well as an online media library and materials order form.
- **Mailing Inserts**. The District currently distributes various public education materials as mailing inserts. Public education materials have been distributed through mailings from the County of Riverside Environmental Health Division, County Mail, County Auditor and Controller, County Libraries, County Fleet, etc.
- **Media Outreach**. The Permittees have implemented radio-advertising campaigns and are evaluating the use of billboard campaigns to communicate pollution prevention concepts and information to the public.
- **Partnerships**. The District partners with several agencies:
  - Animal Care Services. The County Community Health Services provides pet licensing and patrol services to contracted cities and unincorporated areas of the County. They routinely distribute education materials that provide guidelines for pet care activities throughout Riverside County.
  - Riverside County Waste Management. Riverside County Waste Management (RCWMD) manages the recycling and composting programs and utilizes a variety of educational materials to recommend alternatives for reducing, reusing and the recycling of unwanted hazardous products, food wastes, paper and aluminum. There has been close coordination with RCWMD to ensure that the Permittees promote the proper disposal of unwanted waste in most forms of media print, as well as at outreach events. For example, the Permittees contribute funds towards the operation and maintenance of several Antifreeze, Battery, Oil and Paint (ABOP) and Household Hazardous Waste (HHW) Recycling centers, both fixed and mobile, throughout the County. In further support of this activity, the Permittees, Environmental Health and RCWMD also coordinate on the development of several outreach materials that identify the times and locations of HHW/ABOP recycling activities. These materials include a free environmental calendar that is passed out at public events, two page fliers that are mailed to residents via the Penny Saver, as well as a brochure regarding

HHW/ABOP disposal that describes how and where to properly dispose of HHW/ABOP items.

– Public Outreach Events. Participation in several public outreach events including Children's Groundwater Festival, Southern California Fair, Community Water Festival, Santa Margarita Watershed Clean Up, and Keep Riverside Clean and Beautiful, and Orange Blossom Festival.

10.5.1.2 Business Specific Education Program

The business education program consists of the development and distribution of formal BMP guidance for certain potentially polluting business activities including mobile detailing, automotive service center and restaurant cleaning operations; and outreach to business associations. The business specific public education program also attempts to educate businesses regarding the State Board's General Permit-Industrial. The business specific education efforts currently include:

- **Food Services Inspection Program**. This program focuses on the inspection of retail and wholesale food facilities. The Permittees have collaborated with County Environmental Health to ensure that storm water issues are discussed during food services inspections. The Registered Environmental Health Specialists (REHS) inspect over 6,700 food establishments throughout Riverside County. During these inspections food establishments are provided brochures such as entitled "What you should know for…The Food Service Industry" and the poster entitled "Good Cleaning Practices for the Food & Restaurant Industry." The materials provide food service employees, managers and owners with the best management practices that businesses should employ while performing various maintenance activities. In addition, Inspectors discuss common pollution prevention activities that food services facilities can undertake to prevent storm water pollution. The inspectors generally review appropriate methods for cleaning of dumpster and grease bin areas; replacement of leaking or dirty dumpsters; reducing liquid waste in trash and double bagging trash to prevent leaks; encouraging dry sweeping and using dry methods for spill clean up; disposing of wash water to the sanitary sewer rather than the storm drain system; stopping spills at their source; and proper maintenance of outdoor grease interceptors.
- **Industrial Business Inspection Program**. The Permittees have partnered with County Environmental Health's Hazardous Materials Management Division (HMMD) to ensure that storm water issues are discussed during HMMD's CUPA inspections of Riverside County businesses. HMMD implements the Hazardous Waste Inspection Program throughout Riverside County. Specialists in this program inspect 2,300 facilities that generate hazardous waste, evaluate hazardous waste generating industries, investigate reports illegal hazardous waste disposal, and respond to emergency spills of hazardous chemicals. During inspections, specialists routinely distribute appropriate storm water pollution prevention brochures, such as "What you should know for…Automotive Maintenance & Car Care" with a supporting poster entitled, "Keep Your Shop in Tune" to business owners. They also distribute brochures regarding the requirements of the General Permit-Industrial. In addition, Inspectors discuss common pollution prevention activities that facilities can undertake to prevent storm water pollution. Common activities discussed include proper disposal of automotive fluids; working on transmissions, engines, and miscellaneous repairs; preventing & cleaning up leaks and spills/dry method clean up; control of wastewater discharges; vehicle fueling and battery removal and storage; solvent

and grease management; metal grinding and finishing; storing and disposal of waste; outdoor parking and wash water management during outdoor cleaning; and steam cleaning practices.

- **Construction Inspection Program**. Each Permittee inspects construction projects within it's jurisdiction to ensure compliance with their local ordinances and to ensure that the site is covered under the General Permit-Construction, or equivalent Regional Water Quality Control Board Construction Permit, as appropriate. During these inspections, the inspectors discuss appropriate methods to prevent pollutants from being mobilized at construction sites.
- **Water Quality Management Plan and DAMP Section 6 Review**. The Permittees within the SAR and SMR of Riverside County review development projects within their regions for compliance with the Riverside County Water Quality Management Plan for Urban Runoff and Section 6 of the DAMP. During this review, the Permittees discuss appropriate BMPs with developers and engineers to ensure their developments incorporate reasonable site design, source control, and treatment control BMPs to protect downstream Receiving Waters.
- **Brochures**. Outdoor Cleaning Activities, General Storm Water Protection Information, General Construction and Site Supervision, Automotive Maintenance and Car Care, Outdoor Cleaning Activities, You Know…Your Facility May Need a Storm Water Permit (GIASP) and Food Service Industry.
- **BMP Posters**. Posters to address activities associated with the automotive repair industry, and the food/restaurant industry that may pose a threat to water quality and recommends BMPs that can be implemented to reduce the impact on the environment.
- **Website**. The District operates a website that provides downloadable Page Display Format (PDF) versions of brochures and posters, as well as additional information that businesses and developers can use to ensure that they are implementing appropriate BMPs at their sites. An online media library and materials order form is also available.
- **Media Outreach**. The Permittees have used radio campaigns and considered billboard campaigns to deliver pollution prevention messages to appropriate businesses.
- **Community Events**. Information and materials may be delivered to business people during trade shows, trade meetings, or other appropriate community events.

10.5.1.3 Potential Pollutants Education Program

The District has developed a number of brochures and outreach methods to address specific targeted pollutants such as fertilizers, pesticides, household hazardous waste chemicals, antifreeze, oil, batteries, and paint.

- **Partnerships**. The District partners with several agencies:
  - Riverside County Waste Management. Riverside County Waste Management manages the recycling and composting programs and utilizes a variety of educational materials to recommend alternatives for reducing, reusing and the recycling of unwanted hazardous products, food wastes, paper and aluminum. There has been close coordination with RCWMD to ensure that the Permittees promote the proper disposal of unwanted waste in most forms of media print, as well as at outreach events.

- Public Outreach Events. Participation in several public outreach events including Children's Groundwater Festival, Southern California Fair, Community Water Festival, Santa Margarita Watershed Clean Up, and Keep Riverside Clean and Beautiful, and Orange Blossom Festival.

- **Brochures**. Brochures regarding illegal dumping, disposal of household hazardous waste and antifreeze, batteries, oil and paint disposal information, lawn and garden maintenance brochures, car washing, fertilizer, pesticide and household chemical use, pet care brochure, and home garden care guide.
- **Outreach Materials**. Various materials including oil containers, dust pans, etc., based on availability and budget are provided free of charge to the public at community events to promote pollution prevention activities.
- **1-800 Hot Line**. The District operates a countywide 1-800 hotline that local residents can use to report illegal dumping, clogged storm drains, and obtain schedules for household hazardous waste and antifreeze, batteries, oil and paint clean-up locations and schedules.
- **Website**. The District operates a website that provides information on how to report illegal dumping, clogged storm drains and lack of curb markers, as well as provides information on upcoming activities, opportunities for public participation in program development, and general information about urban runoff pollution prevention techniques. It also provides information for kids and teachers as well as an online media library and materials order form.
- **Mailing Inserts**. The District currently distributes various public education materials as mailing inserts. Public education materials have been distributed through mailings from the County of Riverside Environmental Health Division, County Mail, County Auditor and Controller, County Libraries, County Fleet, etc.
- **Media Outreach**. The Permittees have implemented radio-advertising campaigns and are looking at billboard campaigns to deliver pollution prevention concepts and information to a broader range of the public.

10.5.2 Management Objectives

In order for the DAMP to be an effective planning tool for reducing pollutants in storm water, it is essential to involve the general public in the development of compliance documents, to train Permittee staff on the purpose, requirements and implementation of the programs outlined in the DAMP, to ensure that a consistent and cost effective message is brought to the public by coordinating with other regional education programs, and to ensure that the public education message is adaptively managed to ensure that it keeps up with the most recent regulatory requirements, watershed information, and changing MS4 program needs and objectives.

10.5.2.1 DAMP Education

The Permittees have incorporated methods into their DAMP programs to ensure that regulators, Permittee personnel and other key local government and state decision makers are educated regarding the purpose, use and requirements of the DAMP. The following paragraphs describe some of the specific practices used:

- **Management Steering Committee –** As Principal Permittee, the District chairs quarterly meetings with Permittee City Managers or Executive Officers to discuss program requirements, regulatory requirements, upcoming activities, and budgeting issues that impact the operations of their Cities/County. These meetings ensure that the top levels of each local government are aware of the changing needs and requirements of the NPDES Program.
- **Permittee Technical Committee –** Each month the District chairs a meeting of the Permittees for each of the NPDES Permit regions in Riverside County. These meetings are open to the public. Members of regulatory agencies and other local government and state agencies are invited to attend, particularly when issues affecting their operations are addressed. These meetings are used to discuss progress on DAMP development, upcoming activities, changes to the regulatory framework, and to present information on available BMP technologies. Special presentations are also occasionally made by other NPDES permit holders to discuss their programs and how they inter-relate with our programs.
- **Permittee Staff Training Programs –** The District provides staff training at least twice a year for the Permittee groups that the following four broad categories of activities: construction inspection, new development review, municipal activities, and industrial/commercial business inspection. These training programs provide a broad overview of the NPDES regulatory framework, discuss other state permits that impact Permittee activities, discuss DAMP and local ordinance requirements, and BMPs to be deployed during those activities. These programs are coordinated with Regional Board staff. The Permittees continue to review the adequacy of the existing staff training programs and continue to develop and improve them. The Permittees are also seeking to work with neighboring MS4 programs to cooperate in the development of staff training materials.
- **Coordination Meetings with other Agencies/Departments –** As needed the Permittees coordinate with other local governments and state agencies to discuss the requirements of the DAMP and the NPDES MS4 programs. These meetings are used to coordinate agency activities.
- **Comment on CEQA Documents –** Each Permittee reviews CEQA documents for public and private projects in their jurisdictions. The CEQA review includes specific questions regarding water quality and compliance with the DAMP and local ordinances. These questions help to ensure that other public and private entities are aware of water quality requirements.

10.5.2.2 Public Participation

In order for the DAMP to be an effective planning tool for reducing pollutants in storm water, it is essential to educate both the general public and other agencies on the purpose, requirements and implementation of programs outlined in the DAMP. The public participation process integrates public values into the planning, decision-making and problem-solving process. Under the public participation approach, interested and affected persons are afforded opportunities to influence the planning and decision-making process prior to the identification of a recommended solution. This approach allows solutions to public sector problems to be developed that are much more likely to be acceptable to the public and therefore implementable. The following methods may be used to facilitate the public participation process:

- **Open Meetings** – The Permittees currently hold Technical Advisory Committee meetings regarding the ongoing development of the DAMP and related programs. These programs are open to the public and they may provide comment on any activity that the Permittees are undertaking in support of the DAMP.
- **Public Notice** – The Permittees use public notices, posted on their websites and in local newspapers, to notify the public of the upcoming development of compliance programs, or of the release of draft compliance documents. These notices identify the period in which public comment will be accepted, where public comments may be submitted, and where copies of draft documents or supporting information may be located.
- **Public Workshop** – The Permittees may use formal or informal public workshops to facilitate an interactive discussion on draft compliance documents. These public workshops are usually publicly noticed at least two weeks prior to their date and are usually held in conjunction with publicly noticed comment periods.
- **Community Meetings** – The Permittees may use Community Meetings, such as City Council Meetings, local agency meetings, or others, to solicit comments from the public and other agency staff.

10.5.2.3 Program Coordination

A key factor in planning a cost effective and well-organized public education program is coordinating with existing, related programs at the local, state and national level. Such Programs include storm water pollution programs being developed in counties adjacent to Riverside County and throughout California; environmental education programs at the community level offered through other local agencies, environmental organizations, or schools; and County-wide or municipal efforts to promote ride-sharing, recycling, water conservation, and proper household hazardous waste disposal. These programs are coordinated to deliver a consistent message regarding Urban Runoff to the public.

The Permittees currently coordinate activities with several agencies and entities including the San Bernardino County MS4 Program; San Diego County MS4 Program; CASQA; Riverside-Corona and Mission Resource Conservation Districts; Riverside County Environmental Health, the Farm Bureau, the Building Industry Association, Riverside County Waste Management, City of Riverside Utilities, the Auditor-Controllers Office, the Regional Water Quality Control Boards and Caltrans.

10.5.2.4 Adaptive Management

The success of the public education program will depend on its ability to assess its effectiveness and adapt to changing water quality issues within each region of Riverside County. At least twice a year, the public education committee, convened as an individual sub-committee or as part of a budget committee, meets to discuss the effectiveness of the Countywide and Regional public education programs, to discuss countywide and regional needs, and to discuss necessary changes to the public education program to ensure that it adapts to those needs. The following tools may be used by the Permittees to assess the effectiveness of the public education program or to determine changing needs:

- **Monitoring Data** – The Permittees are collecting storm water monitoring data from each region of Riverside County. This data is analyzed for trends in pollutant loading and to see if pollutant

problems can be tied to particular activities or land uses. This data may be used to modify the public education program to address potential pollutant problems or activity problems within specific regions or countywide.

- **Public Surveys** – The Permittees either conduct surveys or may coordinate with surveys conducted by other agencies, to help assess the effectiveness of Permittee public education outreach activities. The Permittees have been conducting a storm water survey of attendants of various community fairs for the past three years. The Permittees also recently coordinated with the Lake Elsinore/San Jacinto Watershed Council on a phone survey of residents of the San Jacinto Watershed regarding water quality concerns. Results from these surveys will be used to adaptively manage the Permittees public education program. In addition, the Permittees Public Education subcommittee is conducting a review of the adequacy of our existing survey program and may make recommendations to modify the survey format or scope to better assess public education program effectiveness. Expansion and/or modification of the public survey program may include analysis of results from construction inspection and industrial/commercial inspection forms. The Permittees may also develop or coordinate with other agencies on other surveys, such as phone surveys or web based surveys in lieu of, or addition to, existing surveys in order to assess effectiveness.
- **Staff Feedback** – The Permittees may modify the public education program based on staff feedback or knowledge of water quality issues affecting Riverside County or specific regions of Riverside County.
- **Incorporation of New State or Federal Guidelines** – The Permittees may modify the public education program to address changes to the regulatory framework or regulatory requirements for specific DAMP related programs or activities.

11.0 MONITORING PROGRAM

11.1 OVERVIEW OF THE CONSOLIDATED PROGRAM FOR WATER QUALITY MONITORING

As Riverside County is within the jurisdiction of three Regional Boards, a Consolidated Program for Water Quality Monitoring (Consolidated Monitoring Program or CMP) was developed in 1994 to integrate the requirements of the three area-wide MS4 Permits. The overall goal of the CMP continues to be to develop information that can be used to support effective implementation of the Urban Runoff management programs throughout Riverside County.

The purpose of the MS4 Urban Runoff program is to manage the quality of Urban Runoff to the MEP to prevent impacts to Receiving Waters. The monitoring program goals necessary to support this purpose are:

- Develop and support an effective MS4 management program.
- Identify those Receiving Waters, which, without additional action to control pollution from Urban Runoff, cannot reasonably be expected to achieve or maintain applicable Water Quality Standards.
- Characterize pollutants associated with Urban Runoff and assess the influence of urban land uses on Receiving Water quality.
- Analyze and interpret the collected data to identify trends, if any, both to prevent impairments through the implementation of preventive BMPs and to track improvements based on the MS4 management program.

The Permittees have revised the CMP to address the detailed objectives specified in the Third-term MS4 Permits[45] and to more effectively utilize finite monitoring resources. The core part of the CMP identifies general monitoring elements common to the three MS4 permits applicable to Riverside County, while appendices to the CMP address watershed-specific requirements. The Permittees have also revised the CMP to reflect an integrated watershed monitoring approach consistent with the detailed objectives specified in the Third-term MS4 Permits. The CMP addresses the following:

- TMDL/303(d) monitoring
- Microbial monitoring
- Bioassessment monitoring
- Field Reconnaissance
- Evaluation of other sources of data
- Mass emission monitoring
- Water column toxicity monitoring
- Hydrologic monitoring
- Land use correlations
- Special studies

[45] Order No. R8-2002-0011, Appendix 3 (Monitoring and Reporting Program), Section II; Order No. R9-2004-001, Monitoring and Reporting Program, Section I.

The water quality monitoring activities require sampling and analysis from both wet weather and dry weather flows. Wet weather sampling involves weather forecasting, scheduling and mobilization of field crews, collection of representative samples from the runoff hydrograph, compositing samples, laboratory analysis, and maintenance of the laboratory analytical results in a water quality database. Dry weather flow in the MS4 indicates a source not related to a rainfall event, which may reflect an illicit connection, an illegal discharge, rising groundwater or other permitted or non-permitted non-storm water discharges. Therefore, the CMP also addresses mobilization guidance; water quality sampling procedures; quality assurance and quality control (QA/QC) procedures; data collection and analysis guidance; monitoring costs; and health and safety issues.

The CMP monitoring stations primarily sample Receiving Waters and discharges from MS4 outfalls. Receiving Water sampling locations were selected to provide baseline information of ambient water quality. The Receiving Water sampling stations include creeks, rivers, lakes, and reservoirs. A summary of the CMP stations is maintained in a sampling data base (spreadsheet format) that includes channel type, location information, nearest rain gauge, type of sampling location (MS4 outfall vs. Receiving Water), sampling methods and equipment, tributary area, and land use mix.

Santa Ana Region Specific Elements

In coordination with the Santa Ana Regional Board staff, the Permittees have identified monitoring locations that focus on areas in the SAR with elevated pollutant concentrations. The intent of these monitoring stations is to characterize Urban Runoff quality from urban land uses.

San Diego Region Specific Elements

San Diego Regional Board staff specified the monitoring locations that are to be used for the triad[46] and tributary monitoring stations and require the Permittees to identify IC/ID stations. This is intended to provide information regarding how the MS4 program as a whole is working by tracking changes in these stations over time.

The CMP is reviewed and updated annually by the Permittees in consultation with the Regional Boards based on program findings and changes in program needs, including TMDL development and implementation. The CMP is also revised to reflect modifications to procedures or to modify the location of monitoring stations as needed to incorporate new technology, address site safety deficiencies, address updated or revised sampling protocols or make other minor modifications to ensure the ongoing effectiveness of the CMP. Major revisions of the CMP, including addition or deletion of stations, or changes to monitoring constituents, are submitted for approval by the Regional Boards.

In addition, the State Board is required to develop a statewide municipal storm water (Urban Runoff) monitoring and reporting program. Once this statewide monitoring and reporting program has been developed, the Permittees will incorporate appropriate components into the CMP.

[46] A station where chemical, toxicity, and bioassessment monitoring occur.

11.2 PARTICIPATION IN REGIONAL AND WATERSHED-BASED MONITORING EFFORTS

The Permittees participate in several regional and/or watershed based efforts that either collect monitoring data or utilize existing monitoring data.

Santa Ana Region Specific Elements

As authorized by the Third-term SAR MS4 Permit, the Permittees may participate in statewide, national, and other monitoring programs in lieu of portions of the Urban Runoff monitoring program. The Permittees also participate in special studies in collaboration with universities, research organizations or other MS4 programs. The purpose of this collaboration is to leverage finite resources to obtain information that will be beneficial on a watershed or region-wide basis. The Permittees coordinate participation in these activities with the Regional Board and summarize such participation in the Annual Report.

Santa Margarita Region Specific Elements

The Third-term SMR MS4 Permit authorizes the Permittees to participate and coordinate with federal, state, and local agencies and other dischargers in the Santa Margarita watershed in development and implementation of a regional watershed monitoring program as directed by the Executive Officer. The intent of a regional monitoring program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled resources of the watershed. During a coordinated watershed sampling effort, the Permittees' sampling and analytical effort may be reallocated to provide a regional assessment of the impact of discharges to the watershed.

11.2.1 Storm Water Monitoring Coalition

The District participates in the Storm Water Monitoring Coalition on behalf of the Permittees. The Storm Water Monitoring Coalition includes representatives from the Los Angeles, San Diego and Santa Ana Regional Boards and each of the Principal Permittees in Southern California (i.e., the counties of Los Angeles, Orange, San Bernardino, San Diego and Ventura), and other interested municipalities. The overall goal for the Storm Water Monitoring Coalition is to establish a Southern California storm water research and monitoring agenda that would focus on improving storm water monitoring science, coordinate data collection efforts, and evaluate the effects of storm water discharges to receiving waters specific to Southern California.

11.2.2 Santa Margarita River Executive Management Team

The latest Memorandum of Agreement (MOA) for the "Santa Margarita Watershed Water Supply Augmentation, Water Quality Protection, and Environmental Enhancement Program", Agreement No. 02-AA-35-0078, between the United States Bureau of Reclamation, The Department of the Navy, United States Marine Corps, Riverside County Flood Control and Water Conservation District, Murrieta County Water District, Rancho California Water District, Fallbrook Public Utilities District, and County of San Diego Planning and Land Use Department, was executed on May 21, 2003. This MOA is for the support and development of Phase 3A of the SMR Study. The MOA established the Santa Margarita River Executive Management Team (SMREMT). The purpose of Phase 3A was:

- The development of a Santa Margarita River watershed water quality model,
- The evaluation of its usefulness for future TMDL development, and
- The evaluation of its usefulness to model assimilative capacity of the watershed.

Data used in development of the Santa Margarita River watershed model came from Fallbrook Public Utilities District, Rancho California Water District, Eastern Municipal Water District, Riverside County Flood Control and Water Conservation District, the Santa Margarita River Watermaster, the Pechanga, Cahuilla, Pauma, and Ramona Band of Indians, US Bureau of Indian Affairs, and the Camp Pendleton Marine Corps Base Office of Water Resources.

11.2.3 San Diego Prop 13 Santa Margarita Watershed Project Team

The County of San Diego obtained funding through a contract with the SWRCB pursuant to the Costa-Machado Water Act of 2000 (Proposition 13) to prepare a Watershed Management Plan for the Santa Margarita River watershed as required to implement California's Non-Point Source Pollution Control Program. A Watershed Management Plan is intended to be a mechanism by which watershed and land use decisions can be made with due consideration of all foreseeable effects on resources throughout the entire watershed. Due to funding limitations, the Santa Margarita River Watershed Management Plan is a less comprehensive effort that basically identifies existing water quality problems within the watershed, and potential solutions to those problems. The document can also be used to assist stakeholders who wish to pursue grant proposals.

A Technical Advisory Committee was formed to assist with the watershed planning effort. The Technical Advisory Committee consists of the U.S. Bureau of Reclamation, U.S. Forest Service, U.S. Marine Corps Base Camp Pendleton, the County of Riverside; the County of San Diego; City of Temecula; the Metropolitan Water District of Southern California, Mission Resource Conservation District, Fallbrook Land Conservancy, San Diego State University Field Station Programs, Boldt Consulting; and RB Riggen and Associates. In addition to the Technical Advisory Committee members, key stakeholders include, among others, San Diego Regional Board; the Murrieta County Water District, the Rancho California Water District, Eastern Municipal Water District, the Santa Margarita Ecological Reserve, the City of Murrieta; the Friends of Santa Margarita; and the U.S. Army Corps of Engineers.

11.2.4 Water Quality Standards Task Force

The Water Quality Standards Task Force is made up of the Principal Permittees of the San Bernardino, Orange and Riverside County MS4 programs, the Santa Ana Regional Water Quality Control Board and other interested stakeholders. The objective of the group is to review the REC-1 Beneficial Use and its assigned Water Quality Objectives to determine if they are appropriate to the needs of the Santa Ana watershed. The group is particularly focused on the appropriateness of the water quality objective for pathogens associated with REC-1.

11.3 WATER QUALITY ASSESSMENT

Precipitation and water quality data are maintained in a proprietary integrated data management system by the District. Stringent quality control procedures, including data analysis and reporting procedures, are

implemented to ensure the integrity of the data in the data management system. Other software may be used as needed to analyze the data and create reports. The Permittees meet at least annually to review and assess available water quality data, assess overall program effectiveness, and review and update the DAMP as necessary.

Specific procedures for assessing the water quality of Receiving Waters based on existing water quality data, results from ongoing IC/ID and Monitoring Programs, and data obtained from other sources are incorporated into CMP. Variations from these procedures will be noted in the Annual Reports. When assessing water quality, the Permittees consider known impairments for Receiving Waters.

The 2006 303(d) List[47] identified some Receiving Waters in the SAR and SMR as impaired. The identified causes for the various impairments include nutrients (nitrogen and/or phosphorus), pathogens, sediment, suspended solids, and unknown toxicity. Additionally, the Regional Boards also identified Receiving Waters that require additional monitoring to improve the quantity and/or quality of the data used to develop the 303(d) List. Some Receiving Waters in the SAR and SMR were designated for additional monitoring for parameters such as metals (aluminum, copper, iron, manganese, and silver), sulfates, total dissolved solids, and salinity.

11.4 IC/ID PROGRAM

The CMP contains a general procedure used to identify and eliminate illicit discharges. The procedure will be updated as appropriate within the SAR Region. The SMR MS4 permit specifies a procedure that must be followed within the SMR.

[47] The current 303(d) List can be viewed or downloaded from the following websites: http://www.waterboards.ca.gov/tmdl/docs/303dlists2006/final/r8_final303dlist.pdf or http://www.waterboards.ca.gov/tmdl/docs/303dlists2006/final/r9_final303dlist.pdf.

12.0 PROGRAM EVALUATION, REPORTING AND REVISION

12.1 ANNUAL REPORTING

Each year the Permittees prepare an Annual Report summarizing the implementation of the programs described in the DAMP for submittal to the Regional Boards. To support preparation of the Annual Reports, the Permittees submit to the District documentation of their implementation of the DAMP compliance programs utilizing standardized reporting forms. Copies of these standardized reporting forms are included in Appendix R. The reporting forms will be amended by the Permittees as needed to facilitate changes in compliance programs or more accurate reporting of compliance programs.

12.2 PROGRAM EVALUATION

The Permittees will regularly assess the component programs of the DAMP to identify improvements that will promote the reduction of pollutants in Urban Runoff to the MEP while also supporting the responsible management and allocation of the public resources available to implement the DAMP.

The short-term strategy for assessing the effectiveness of the DAMP will focus on quantitative, but indirect methods (that is, not directly based on the quality of Urban Runoff or receiving water quality) of assessment. The Permittees will track and report the following data that are believed to have a positive influence on Urban Runoff and receiving water quality:

- The estimated quantity of material removed from the MS4. (Regional and Permittees)
- The estimated quantity of material collected under litter removal and street sweeping programs. (Co-Permittees)
- The total number of construction sites inspections for storm water compliance. (Co-Permittees)
- The total number of industrial and commercial facility inspections for storm water compliance (Co-Permittees).
- The quantity of household hazardous waste material collected through the HHW Collection and ABOP Programs. (Regional)
- The number of Permittee staff receiving training for activities related to DAMP implementation. (Regional and Permittees)
- The number of Urban Runoff complaints received through hotlines. (Regional and Permittees)
- The number of illicit connections detected and eliminated. (Permittees)
- Construction outreach events conducted. (Regional and Co-Permittees)
- Industrial/Commercial outreach events conducted. (Regional and Co-Permittees);
- Media impressions. (Regional and Co-Permittees)
- Classroom presentations. (Regional)
- Public education events conducted. (Regional and Co-Permittees)

In addition to assessing the effectiveness of the various program elements, the Permittees will conduct an assessment of the effectiveness of their overall programs. In the SMR, the Permittees will assess the overall program effectiveness using the measurable goals and direct and indirect assessment measurements described in their Individual SWMPs. The legal authority and program management elements of the Permittee programs will also be considered in this assessment. Major accomplishments and changes to be implemented in the subsequent year to improve the effectiveness of the program will be included in the evaluation.

The long-term strategy for assessing the effectiveness of the DAMP will focus on water quality data obtained as part of the CMP. This is by necessity a long-term strategy since the first step will be to develop and understand baseline data, and then due to the inherent variability of Urban Runoff, years of monitoring data will be necessary to identify statistically significant trends or conclusions. Additionally, because there are numerous program elements being implemented concurrently and because other environmental regulation indirectly impacts Urban Runoff, the ability to identify cause-and-effect relationships between a specific program element and/or BMP and improvement in the quality of Urban Runoff is complicated, if not infeasible.

12.3 DAMP REVISIONS

As part of the annual reporting process for the SAR and SMR, the Permittees review the DAMP to identify the need, if any, for revisions. The Annual Reports will include the findings of these reviews. Additionally, the Permittees will propose revisions to the DAMP under the following conditions:

- As directed by the Executive Officer to reflect regional and watershed-specific requirements and/or Waste Load Allocations developed and approved pursuant to the TMDL process for Impaired Waterbodies.
- As directed by the Executive Officer where the DAMP must be revised in order to address exceedances of Receiving Water Limitations that have been determined to be contributed to or caused by Urban Runoff.

Specific TMDL requirements and programs will also be incorporated into the DAMP as the TMDLs are incorporated into the Basin Plan. The DAMP is sufficiently flexible to allow many TMDL requirements to be incorporated without the need for revision. These requirements may include schedules for meeting interim and final Urban Runoff Waste Load Allocations, evaluating the effectiveness of BMPs and/or other control actions implemented to meet the Waste Load Allocations, and evaluating compliance with the Waste Load Allocations. Interagency Agreements or Memoranda of Agreement may be developed to identify Permittee and non-Permittee responsibility in TMDL activities. Current TMDLs that are in process include:

- San Jacinto Watershed Nutrient TMDL – Board Order R8-2004-0037
- Reach 3 Santa Ana River Bacteria TMDL – Tentative Order R8-2005-0001
- Canyon Lake Pathogen TMDL – Board Order not assigned

The revised Riverside County DAMP will be submitted with the respective SAR or SMR ROWD. Upon approval by the Executive Officer, the Permittees will implement the DAMP revisions in accordance with the schedule included as part of the ROWD.

13.0 TMDL IMPLEMENTATION

13.1 INTRODUCTION

The federal Clean Water Act Section 303(d) requires that states identify receiving waters that do not or are not expected to meet Water Quality Standards (beneficial uses, Water Quality Objectives and the antidegradation policy). Once a waterbody has been so identified placed on the 303(d) List of impaired waters, states are required to develop a TMDL to address each Pollutant causing impairment. A TMDL defines how much of a Pollutant a waterbody can tolerate and still meet Water Quality Standards. Each TMDL must account for all sources of the Pollutant, including: discharges from wastewater treatment facilities; runoff from homes, forested lands, agriculture, and streets or highways; contaminated soils/sediments, legacy contaminants; on-site disposal systems (septic systems) and aerial deposition.

Federal regulations require that the TMDL, at a minimum, account for contributions from point sources (permitted discharges) and contributions from non-point sources, including natural background. In addition to accounting for past and current activities, TMDLs may consider projected growth that could increase Pollutant levels. TMDLs allocate allowable Pollutant loads to each source, and identify management measures that, when implemented, will assure that Water Quality Standards are attained. State Water Code Section 13000 also requires the Regional Boards to develop implementation plans to define schedules, dischargers, tasks, and other actions necessary to attain Water Quality Standards.

This section summarizes the Permittees programs to comply with TMDL Waste Load Allocations and TMDL implementation plan tasks assigned to the Permittees. It should be noted that TMDLs are waterbody specific, and therefore do not always regulate all of the Permittees in either the SAR or the SMR. Specific Permittees identified as discharging to TMDL regulated waterbodies are identified in Tables 13-1 and 13-2. Existing TMDL Waste Load Allocations and implementation plan tasks assigned to the various Permittees as part of USEPA approved TMDLs are also summarized in Tables 13-1 and 13-2.

Several tables from Chapter 5 of the Santa Ana Region Basin Plan are summarized in this section of the DAMP. However, the Basin Plan is a living document and is amended on occasion. The Basin Plans should always be reviewed for the most accurate and up-to-date information regarding TMDL compliance requirements.

Table 13-1. TMDLs Adopted and Approved by the Regional Board and USEPA and Associated Waste Load Allocations

Waterbody	Pollutant/Stressor	Assigned Dischargers	WLA
Canyon Lake (Resolution R8-2004-0037)	Total Phosphorus – MS4 Discharges	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont	306 kg/yr (total) based on a 10 year running average to be achieved as soon as possible, but no later than by December 31, 2020
	Total Nitrogen – MS4 Discharges	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont	3,974 kg/yr (total) based on a 10 year running average to be achieved as soon as possible, but no later than by December 31, 2020
Lake Elsinore(Resolution R8-2004-0037)	Total Phosphorus – MS4 Discharges	County of Riverside and City of Lake Elsinore	124 kg/yr (total) based on a 10 year running average to be achieved as soon as possible, but no later than by December 31, 2020
	Total Nitrogen – MS4 Discharges	County of Riverside and City of Lake Elsinore,	349 kg/yr (total) based on a 10 year running average to be achieved as soon as possible, but no later than by December 31, 2020
Middle Santa Ana River Reach 3 (Resolution R8-2005-0001)	Pathogen Indicators – MS4 Discharges	County of Riverside, Cities of Corona, Riverside and Norco	Fecal Coliform: log mean less than 200 organisms/100 ml based on five or more samples per 30 day period, and not more than 10% of the samples exceed 400 organisms/100 ml for any 30-day period to be achieved as soon as possible, but no later than December 31, 2020

Table 13-2. Adopted TMDLs and Implementation Tasks

TMDL	Implementation Plan Task	Responsible Party
Nutrient TMDLs for Lake Elsinore and Canyon Lake (Resolution R8-2004-0037)	Task 4 – Nutrient Water Quality Monitoring Program for Lake Elsinore, Canyon Lake and the San Jacinto Watershed	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont
	Task 6 – On site Disposal Systems (Septic System) Management Plan	County of Riverside, Cities of Perris, Moreno Valley, and Murrieta
	Task 7 – Urban Discharges – Revise DAMP and WQMP	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont
	Task 9 – Lake Elsinore In-Lake Sediment Nutrient Reduction Plan	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont
	Task 10 – Canyon Lake In-Lake Sediment Treatment Evaluation	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont
	Task 11 – Watershed and Canyon Lake and Lake Elsinore In-Lake Model Updates	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont
	Task 12 – Pollutant Trading Plan	County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont
Middle Santa Ana River Watershed Bacterial Indicator TMDL (Resolution R8-2005-0001)	Task 3 – Develop and Implement Watershed Wide Bacterial Indicator Water Quality Monitoring Program	County of Riverside, Cities of Perris, Moreno Valley, and Murrieta
	Task 4 – Urban Discharges – Develop Urban Source Evaluation Plan, Revise DAMP and WQMP	County of Riverside, Cities of Perris, Moreno Valley, and Murrieta

13.2 TMDL IMPLEMENTATION STRATEGY

USEPA's Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits, 60 Federal Register 43761 (Aug 26, 1996) recognizes the need for an iterative BMP approach to control Pollutants in storm water discharges. In addition, USEPA recommends the use of the term

"phased TMDLs" for TMDLs with significant data uncertainty where the State expects that the loading capacity and allocation scheme will be revised in the near future as additional information is collected[48].

TMDLs are often based on preliminary and incomplete data. Further, the variability in hydrologic systems and minimal data generally available make it difficult to determine with precision or certainty actual and projected loadings and load reductions for individual dischargers or groups of dischargers.

The Permittees have continued to work with the Regional Board staff to determine if it is appropriate to implement TMDL Waste Load Allocations through a phased TMDL and/or iterative BMP process. The Regional Board describes the TMDL Waste Load Allocation and implementation requirements in the TMDL implementation plan. TMDL implementation plans assign responsibilities to specific MS4 dischargers to identify sources of impairment, to propose BMPs to address those sources, and to monitor, evaluate and revise BMPs based on the effectiveness of the BMP implementation program. Once a TMDL is approved by USEPA, the Permittees begin efforts, to comply with TMDL Waste Load Allocations as defined by the TMDL implementation plan requirements. In many cases compliance efforts are already underway prior to approval of the TMDL.

Because TMDLs often regulate a broad cross-section of dischargers beyond MS4 permittees, the stakeholders generally form a task force to address implementation plan task assigned to multiple dischargers. A task force utilizes economies of scale for implementing TMDL compliance tasks and assist in the pursuit of grant opportunities. Task forces specifically are useful to develop a regional BMP compliance document, implement regional compliance monitoring, and develop stakeholder consensus on necessary recommendations regarding modification to the TMDL or Basin Plan that are necessary to protect Beneficial Uses or to recognize site specific conditions. Such Basin Plan amendments are usually submitted to the Regional Board through the Basin Plan Triennial Review Process.

13.3 PROGRAMMATIC DAMP COMPLIANCE EFFORTS

The DAMP contains several provisions that are intended to function as essential BMPs for any adopted TMDL. These BMPs form the foundation for compliance with TMDL requirements. Additional BMPs necessary to address specific TMDL Waste Load Allocations and implementation plan tasks are described in the following sections.

Programmatic TMDL BMPs:

- Permittees are required to review their CEQA processes to ensure that related TMDL issues are properly considered and addressed (Section 6.3).
- TMDL compliance requirements are discussed in formalized training prepared for the Permittees (Section 5.5, 6.5, 7.7, and 8.8).

[48] US EPA 2006. Clarification Regarding "Phased" Total Maximum Daily Loads, http://www.epa.gov/owow/tmdl/tmdl_clarification_letter.html

- Pollutants that are impairing downstream Receiving Waters are recommended as a high priority for violations IC/ID activities (Table 3-2).
- New Developments and Significant Redevelopments are required to implement BMPs with a high or medium effectiveness when there is a potential for Pollutants from the project site to aggravate impairments in downstream Receiving Waters (Appendix O – Section 4.3 and 4.5.3). In addition, the Permittees are developing a revised Storm Water Quality BMP Design Handbook that will further promote BMPs that are effective at addressing impairments.
- Section 2.3.5 and Section 2.4.5 summarize existing water quality issues within each watershed.
- Section 13 has been added to the DAMP to describe TMDL implementation.

13.4 LAKE ELSINORE / CANYON LAKE NUTRIENT TMDL

13.4.1 Regional Board Action History

In 1998, the Santa Ana Regional Board listed Lake Elsinore and Canyon Lake as impaired water bodies in the Clean Water Act Section 303 (d) list for excessive levels of nutrients. Lake Elsinore was also listed for low dissolved oxygen among other constituents.

In 2000, the Santa Ana Regional Board initiated the process to develop a nutrient TMDL (with response targets for Chlorophyll *a*, low dissolved oxygen, and ammonia) for Canyon Lake and Lake Elsinore, as required by the federal Clean Water Act and California's Non-point Source Pollution Control Plan. This process included the formation of the Lake Elsinore/Canyon Lake TMDL Workgroup in August 2000, as well as, the development and implementation of various in-lake and watershed water quality monitoring programs.

In December 2004, the Santa Ana Regional Board adopted the proposed Lake Elsinore and Canyon Lake nutrient TMDL Basin Plan Amendment. The Basin Plan Amendment established nutrient Waste Load Allocations and Load Allocations and included an implementation plan. The implementation plan requires stakeholders to develop various nutrient management plans and long term monitoring plans aimed at identifying appropriate lake management measures reducing nutrient discharges to Lake Elsinore and Canyon Lake and assessing the appropriateness of TMDL targets and allocations. Work on the TMDL is on-going through the efforts of the TMDL Task Force.

The Santa Ana Regional Board is in the process of developing additional TMDLs to address the Canyon Lake pathogen impairment and the Lake Elsinore PCB and toxicity impairments.

USEPA recommends the use of the term "phased TMDLs" for TMDLs with significant data uncertainty where the State expects that the loading capacity and allocation scheme will be revised in the near future as additional information is collected. The Lake Elsinore/Canyon Lake TMDL has implemented a phased approach in recognition of the limits of the current data and that optimum strategies for TMDL compliance may change with better data.

13.4.2 TMDL Task Force

Since August 2000, TMDL Task Force efforts have been coordinated and administered through the Lake Elsinore San Jacinto Watersheds Authority (LESJWA), a joint powers authority. As a result of the adoption of the TMDL in 2004 the TMDL dischargers formally organized the existing TMDL stakeholder group into a funded TMDL Task Force in 2006. The purpose of the Task Force is to conduct studies necessary to collect data to analyze the appropriateness of the TMDL, identify in-lake and regional watershed solutions, pursue grants, coordinate activities among all of the various stakeholders, and recommend appropriate revision to the Basin Plan language regarding Lake Elsinore and Canyon Lake based on data collection and analysis.

13.4.3 Lake Elsinore San Jacinto Watersheds Authority's Role

The LESJWA was formed in April of 2000 after California voters passed Proposition 13, a bond measure to fund water projects throughout the state. Proposition 13 specifically earmarked $15 million for LESJWA to implement projects to address the impairments in Lake Elsinore and Canyon Lake. LESJWA is made up of representatives from the Santa Ana Watershed Project Authority, Elsinore Valley Municipal Water District, the City of Lake Elsinore, the City of Canyon Lake and County of Riverside. LESJWA is charged with improving water quality and protecting wildlife habitats, primarily in Lake Elsinore, but also in Canyon Lake and the surrounding watershed.

Several LESJWA projects are central to the stakeholders TMDL compliance strategies. Specific LESJWA projects include:

- Lake Elsinore Aeration System
- Lake Elsinore Wetland Enhancement
- Lake Elsinore Carp Removal
- Lake Elsinore Axial Flow Pumps
- Lake Elsinore Island Wells
- Lake Elsinore Dredging Project

In addition, LESJWA has conducted several studies to evaluate lake conditions, alternative management measures and potential funding mechanism. These efforts for the basis of the ongoing compliance work of the TMDL Task Force. In addition, the TMDL Task Force continues to rely on the LESJWA Technical Advisory Committee for technical guidance.

13.4.4 Permittee Compliance Strategy

13.4.4.1 Implementation Plan

Due to limits in the quality of monitoring data, the Santa Ana Regional Board and dischargers agreed to incorporate USEPA's interim approach for TMDL implementation (60 FR 43761) by proposing a phased implementation of the Canyon Lake and Lake Elsinore TMDL. The TMDL also allows the dischargers until 2020 to comply with nutrient Waste Load Allocations and Load Allocations so that iterative BMP implementation can also be considered. The TMDL Implementation Plan also provides for an initial

phase of data collection and analysis necessary to determine if a Use Attainability Analysis, Site Specific Objective or other regulatory actions such as modifications to TMDL numeric targets, Load Allocations or Waste Load Allocations are appropriate. Preliminary recommendations from the Task Force to the Regional Board are scheduled for 2010.

13.4.4.2 Overall Approach to Achieve Waste Load Allocations

As noted in the Santa Ana Regional Board TMDL Staff Report dated December 17, 2004, the costs to implement watershed based BMPs believed capable of meeting current TMDL requirements is between $2.7 - $40 billion dollars. These costs indicate that achieving the specified Waste Load Allocations for Urban Runoff may be infeasible. In addition, there is no guarantee that such an expenditure on watershed based BMPs would be capable of fully achieving compliance with the adopted Waste Load Allocations. The experts who conducted a peer review of the TMDL on behalf of the Santa Ana Regional Board noted that compliance with the TMDL may be infeasible.

To comply with the Lake Elsinore / Canyon Lake Waste Load Allocations, the Permittees, in conjunction with the TMDL Task Force proposed a phased BMP implementation strategy prioritizing in-lake treatments systems under development through LESJWA and the Task Force over watershed-based BMPs in order to maximize the likelihood for success and cost effectiveness. This strategy would help quantify the effectiveness of in-lake BMPs and focus initial TMDL resources toward BMPs that would most likely produce the greatest gains toward TMDL compliance.

The County of Riverside and City of Lake Elsinore, as member agencies of LESJWA, are also contributing towards the construction of the Lake Elsinore Aeration System and participating in the ongoing operations and maintenance cost of the axial flow pumps and various bio-manipulation projects such as carp removal and wetland enhancements. These projects are expected to jointly achieve the 35% reductions in in-lake phosphorous concentrations required by the TMDL. These projects may attain further reductions that can be used to offset excess nutrient discharges from other sources.

The TMDL Task Force will review the TMDL assumptions and evaluate opportunities for site specific objectives, pollutant trading strategies and integration strategies; that will be coordinated with the development of Basin Plan Amendment language with the RWQCB. If necessary the TMDLs will be revised as part of the RWQCB's Triennial Reviews at a minimum, or no later than by June 2010. In addition, the TMDL requires that models be updated to evaluate appropriateness of Waste Load Allocations and Load Allocations. These models will consider natural background loads, effects of lake water level management activities, changes in land use, changes in water use, hydrologic modifications, impacts of watershed BMPs, and in-lake water quality control projects. These model updates will help the Permittees with adaptive management of the watershed.

The Permittees have also identified feasible watershed-based BMP, such as BMPs for New Development and Significant Redevelopments that are tributary to the lakes to control the discharge of nutrients.

To comply with the initial phase of the TMDL, the Task Force would evaluate attainment of Water Quality Standards by LESJWA projects. The Task Force will also evaluate opportunities for Pollutant trading and additional steps, if required, to achieve Waste Load Allocations. Current Task Force work and studies are intended to be complete by 2010.

The TMDL Task Force or LESJWA have obtained the following grants that help stakeholders to comply with TMDL:

- In January 2002, LESJWA received a Water Quality Planning Program "205(j) Grant" to perform the "Lake Elsinore and Canyon Lake Nutrient Source Assessment," which was completed in January 2003.
- In August 2002, LESJWA obtained Proposition 13 funding to develop a "Nutrient Management Plan", completed in April 2004. This Plan identified alternative implementation measures to control excess nutrients in the watersheds.
- In December 2005, the TMDL Task Force obtained, through the San Jacinto Watershed Council, a Proposition 50 grant to fund data collection.

13.4.4.3 TMDL Task specific to Permittee Dischargers

13.4.4.3.1 Task 6 of the Lake Elsinore and Canyon Lake Nutrient TMDL Implementation Plan

Task 6 of the Lake Elsinore and Canyon Lake Nutrient TMDL Implementation Plan requires that no later than 6 months after the effective date of an agreement between the County of Riverside and the Santa Ana Region Regional Water Quality Control Board (RWQCB) to implement regulations adopted pursuant to Water Code Sections 13290-13291.7, or if no such agreement is required or completed, within 12 months of the effective date of these regulations, the County and the cities of Perris, Moreno Valley, and Murrieta shall, as a group, submit a Septic System Management Plan to identify and address nutrient discharges from septic systems within the San Jacinto Watershed. The Septic System Management Plan shall implement regulations adopted by the State Water Resources Control Board pursuant to California Water Code Section 13290 – 13291.7.

Regulations promulgating Sections 13290-13291.7 are still pending. Upon adoption of these regulations by the SWRCB, the named Permittees will develop the required Septic System Management Plan in accordance with Task 6. The Septic System Management Plan may be incorporated into the DAMP and/or Water Quality Management Plan (WQMP) upon its completion.

In the interim, the County of Riverside has adopted Ordinance 856 which prohibits new septic systems in two designated areas of Quail Valley, which is within the San Jacinto Watershed. This prohibition affects 1530 lots, which constitutes 59% of the undeveloped lots in those areas. The Ordinance also mandates the connection of all existing homes in Quail Valley to a sewer system within one (1) year of its availability. In addition to this Ordinance the Department of Environmental Health is refining the review process for septic systems and has drafted revisions to County Ordinance 650 to preclude lots that would be contributory to the surfacing septic waste issue in the region.

In addition, the Permittees have partnered with the San Jacinto River Watershed Council to obtain a Prop 50 IRWM Planning Grant, which includes a task to develop a septic system management plan for the San Jacinto Watershed. The Permittees are using this grant money to initiate the development of the compliance document consistent with the requirements of Task 6. The Prop 50 IRWM Planning Grant is proposed be used to develop a map of areas of concentrated septic systems that may be adversely impacting surface waters or groundwaters within the watershed. Potential mitigation measures for these areas will also be proposed. The Prop 50 IRWM Planning Grant septic system management plan will form the basis for the final Task 6 Septic System Management Plan, which will be completed no later than 6 months after the effective date of an agreement between the County of Riverside and the Santa Ana

Region Regional Water Quality Control Board (RWQCB) to implement regulations adopted pursuant to Water Code Sections 13290-13291.7, or if no such agreement is required or completed, within 12 months of the effective date of these regulations.

13.4.4.3.2 Task 7 of the Lake Elsinore and Canyon Lake Nutrient TMDL Implementation Plan

Task 7 of the Lake Elsinore and Canyon Lake Nutrient TMDL Implementation Plan mandates that various Urban Runoff dischargers modify compliance documents as necessary to comply with the Lake Elsinore and Canyon Lake Nutrient TMDL. Tasks 7.1 and 7.2 require the specified Permittees(County of Riverside, Cities of Lake Elsinore, Canyon Lake, Hemet, San Jacinto, Perris, Moreno Valley, Murrieta, Riverside and Beaumont) to modify the DAMP and WQMP(Appendix O to the DAMP), respectively to address TMDL Implementation Plan requirements. Necessary revisions to comply with Tasks 7.1 and 7.2 are incorporated throughout the DAMP and are summarized in the following paragraphs. Specifically:

- Section 13.4.4.2 summarizes the Permittees strategy for complying with the Lake Elsinore and Canyon Lake TMDL WLA assigned to the specified Permittees.

- Section 13.3 describes programmatic BMPS implemented by the Permittees to address this and other TMDLs, including public education and outreach, inspection and enforcement actions taken by the Permittees. Section 13.4.4.2 and 13.4.4.3 describes the Permittees participation in the Lake Elsinore and Canyon Lake TMDL Task Force and LESJWA and their roles in assisting the Permittees in implementing Tasks 4, 9, 10, 11 and 12 of the Lake Elsinore and Canyon Lake Nutrient TMDL Implementation Plan.

- Section 13.4.4.5 describes how the Permittees propose to address BMP Effectiveness evaluations.

- Section 13.4.4.6 describes how the Permittees propose to conduct monitoring to determine compliance with Lake Elsinore and Canyon Lake Nutrient TMDL Waste Load Allocations assigned to the Permittees.

- In addition to the compliance programs specified above, the Permittees also implement the following additional compliance programs that manage nutrient discharges to Canyon Lake and Lake Elsinore:

    - The Permittees have coordinated with local sanitary sewer operators to develop a Sanitary Sewer Overflow (SSO) response procedure designed to protect the MS4 from impacts of SSOs (Section 4.7 of the DAMP). In addition, the Permittees have summarized County Health Department regulations related to septic system management.

    - The Permittees implement a comprehensive Household Hazardous Waste collection program (Section 4.8.1 of the DAMP) designed to collect fertilizers among other potential pollutants. These collection programs help to reduce the nutrient loading from urban areas to Lake Elsinore and Canyon Lake.

- Applicable Permittee public works projects are required to comply with WQMP requirements (Section 5.1 of the DAMP). See Section 6.4.3 of the WQMP (Appendix O) for specific WQMP requirements that address the TMDLs.

- Permittee construction projects are required to comply with the provisions of the General Construction Permit, including the preparation of a SWPPP (Section 5.2 of the DAMP). The SWPPP ensures that stormwater and non-stormwater pollutant discharges, including sediments, nutrients, and other pollutants from Permittee construction projects are mitigated.

- The Permittees developed maintenance schedules and report on BMP and MS4 maintenance activities annually (Section 5.3.1 of the DAMP). The maintenance schedules promote proper operation of publicly owned BMPs and MS4 facilities and assist with mitigating pollutant discharges from MS4s and effective pollutant removal from BMPs.

- The Permittees are required to develop, implement and maintain facility specific Pollution Prevention Plans. Section 5.3.2 of the DAMP includes a summary of applicable nutrient-related BMPs to be incorporated into the facility-specific PPPs. Nutrient management measures include BMPs for outdoor material storage, building and grounds maintenance, housekeeping practices, landscape maintenance, and water and sewer utility maintenance. Additional BMPs are identified and incorporated as necessary to address unique discharges from the facility.

- During General Plan updates, the Permittees are asked to evaluate their General Plan's ability to address several policy questions including "Are there existing or proposed TMDLs or other such regulations pertaining to receiving waters in the jurisdiction?" If so, the Permittees are asked to consider additional watershed protection principals and objectives for managing Urban Runoff (Section 6.2 of the DAMP).

- The Permittees have implemented procedures to ensure that new development and redevelopment projects address their water quality impacts (Section 6.4). These procedures include requiring developers to identify the impacts of their projects, propose appropriate BMPs to mitigate those impacts, and identify perpetual maintenance mechanisms to ensure that those BMPs will continue to function throughout the life of the development. Requirements for project types rising to WQMP status are addressed in Section 6.4.3 of the WQMP (Appendix O). Projects not rising to WQMP status, defined as "Other Development Projects" in DAMP Section 6.4.4, are also required to mitigate their impacts. Section 6.4.4 specifically notes that Other Development Projects are required to implement Site Design BMPs and Source Control BMPs. Other Development Projects may also be required to implement Treatment Control BMPs if they discharge Urban Runoff to Receiving Waters listed as impaired on the State Board's 303(d) List.

- The WQMP is designed to specifically address the TMDL requirements. Per Provision VIII.B.1 of the MS4 Permit, the Permittees must require developments of the applicable categories to implement a WQMP. Applicable projects must complete a project-specific WQMP. In the project-specific WQMP the project proponents must characterize the development site, including identification of any pollutants that may be generated by the development and legacy pollutants from previous land uses, identify any 303(d) listed waterbodies or TMDL regulated Receiving Waters within the Watershed to which they are tributary, and compare the list of pollutants for which the Receiving Waters are

impaired with the pollutants expected to be generated by the Project (Section 4.3 of the WQMP). Pollutants associated with impairments must implement medium or high effectiveness BMPs as defined by Table 3 of the WQMP. In addition, developments must implement Site Design BMPs and Source Control BMPs designed to reduce nutrient discharges from stormwater discharges and prevent non-stormwater discharges. Site Design BMPs include minimizing Urban Runoff, conserving natural areas and minimizing directly connected impervious areas. Source Control BMPs include resident education (including garden and lawn care guides, pet waste brochures and HHW/ABOP event brochures), irrigation system and landscape maintenance restrictions, common area litter control, drainage facility inspection and maintenance, wash water controls for food preparation areas, and properly designed trash storage areas and outdoor material storage areas. Developers must also propose adequate operation, maintenance and funding mechanisms to ensure the efficacy of the BMPs for the life of the development.

- The Permittees are also developing new, more comprehensive BMP guidance for use by the Permittees and the development community to assure compliance with the nutrient WLAs for Urban Runoff. The revised guidance will focus on landscape based BMPs with infiltration components. These BMPs will be more effective at addressing nutrient sources from new development by reducing runoff volume and trapping nutrients in sand media. The Permittees are also reviewing BMP guidance recently issued by Caltrans that may more effectively address nutrient treatment and removal. The guidance will include detailed design criteria to assist in ensuring the ongoing functionality of BMPs. The Permittees expect to complete the proposed guidance by October 1, 2008.

- Construction sites that disturb an area greater than one acre and are located adjacent to, within 200 feet of, or directly discharge to an identified impaired waterbody within the Permit area are assigned a high priority for wet weather inspections (Section 7.7 of the DAMP).

- The Permittees are required to inspect a number of industrial and commercial businesses including nurseries, greenhouses, landscape and hardscape installation business base of operations, restaurants, and facilities handling hazardous wastes. The Permittees review the activities of these businesses to ensure compliance with local stormwater ordinances and the NPDES MS4 Permit. Inspectors specifically look for observations of non-stormwater discharges, potential illicit connections, and illegal discharges to the MS4, and for implementation and maintenance of appropriate minimum BMPs, including a quantitative assessment of the effectiveness of the BMPs implemented. Appropriate education materials are also distributed (Section 8 of the DAMP).

13.4.4.4 Other TMDL Tasks Including Permittee Dischargers

The following tasks outlined in the Lake Elsinore/Canyon Lake TMDL[49] are assigned to a number of stakeholders in the TMDL, including specific Permittees. Compliance documents are being prepared through the TMDL Task Force to collectively comply with the TMDL. The tasks are outlined in Table 13.2 as well as listed below:

[49] http://www.sawpa.org/tmdl/Lake_elsinore_Canyon_lake.html

- Task 4 – Nutrient Water Quality Monitoring Program for Lake Elsinore, Canyon Lake and the San Jacinto watershed
- Task 9 – Lake Elsinore In-Lake Sediment Nutrient Reduction Plan
- Task 10 – Canyon Lake In-Lake Sediment Treatment Evaluation
- Task 11 – Watershed and Canyon Lake and Lake Elsinore In-Lake Model Updates
- Task 12 – Pollutant Trading Plan

13.4.4.5 Effectiveness Analysis

The existing effectiveness and qualitative assessments described in Section 12 of the DAMP meet TMDL BMP evaluation requirements. In summary, the Permittees annually review their programs for indications of internal process/procedure deficiencies that need to be addressed to properly implement specified BMPs. Every five years as part of the ROWD the Permittees evaluate the overall effectiveness of their MS4 programs, including attainment of specified Waste Load Allocations and TMDL implementation plan requirements and make appropriate changes to MS4 Permit compliance programs.

13.4.4.6 Monitoring for Compliance with the TMDL

Urban Waste Load Allocation compliance monitoring is achieved through Task 4 of the TMDL Implementation Plan, which requires three separate monitoring programs (watershed-wide, Lake Elsinore, and Canyon Lake monitoring programs). The three monitoring programs are administered by the TMDL Task Force to determine compliance with TMDL Waste Load Allocations and Load Allocations. The monitoring program is supported by District staff and funding from designated Permittees. The TMDL Task Force prepares and submits annual reports on behalf of the Permittees.

In addition, the Permittees' NPDES MS4 Monitoring Program also collects data on nutrient discharges. The Permittees also participate in regional monitoring efforts sponsored by the Storm Water Monitoring Coalition, the Southern California Coastal Watershed Research Group, California Stormwater Quality Association, and other groups as appropriate. Data and conclusions from these programs are analyzed and summarized as part of the Permittees' Annual Monitoring Reports.

13.5 THE MIDDLE SANTA ANA RIVER TMDL

13.5.1 Regional Board Action History

In August 2001, the Santa Ana Regional Board initiated TMDL development to address the excess levels of pathogen indicators in Reach 3 of the Santa Ana River, Cucamonga Creek, and Mill Creek. This effort included the formation of the Middle Santa Ana River TMDL Workgroup. This workgroup (which includes representatives from cities in Riverside, San Bernardino, and Los Angeles counties, the Counties of Riverside and San Bernardino, agriculture and dairy operators, and environmental groups) worked in cooperation with Santa Ana Regional Board staff to assess pathogen indicator sources to the impaired waterbodies and identify potential mitigation measures.

The objectives of the workgroup efforts include the development and implementation of a water quality monitoring program to evaluate in-stream "pathogen indicator" concentrations. In addition, a field survey

to evaluate the extent, frequency, and degree to which these waterbodies are used by the public for recreational activities (REC-1 and REC-2). Funding for this project has been provided in full or in part through an agreement with the State Board pursuant to the Costa-Machado Water Act of 2000 (Proposition 13) and any amendments thereto for the implementation of California's Nonpoint Source Pollution Control Program.

Beginning in February 2002, the workgroup developed and implemented an extensive pathogen water quality monitoring program. Samples were collected by Santa Ana Regional Board staff and stakeholder agencies at 10-13 locations on weekly basis during nine 30-day sampling periods. These sampling periods occurred during February, March, July and September of 2002, January and March of 2003, and from January through mid-April 2004. Agencies participating in the monitoring program included San Bernardino County Flood Control District, City of Riverside, Orange County Water District, Inland Empire Utilities Agency, and Chino Basin Watermaster. Results of this program verified significant impairments to the identified water bodies and established the basis of the Santa Ana Regional Board TMDL report.

The TMDL Workgroup also conducted a beneficial use survey of the watershed as part of the data collection effort to support the development of TMDLs for the Middle Santa Ana River watershed. The primary objective of this effort was to collect data to evaluate the extent, frequency, and degree to which the Santa Ana River channel and its Chino Basin tributaries are used by the public for recreational activities (REC-1 and REC-2). The Middle Santa Ana River TMDL was adopted by the Regional Board on August 26, 2005.

13.5.2 TMDL Task Force

In 2002 the stakeholder groups formed a TMDL Task Force. TMDL Task Force efforts have been coordinated and administered through the Santa Ana Watershed Project Authority (SAWPA) a joint powers authority. SAWPA jurisdiction extends throughout the Santa Ana watershed, crossing over multiple jurisdictional lines. Their jurisdictional scope and expertise have been instrumental in carrying out interagency functions. The purpose of the Task Force is to conduct studies necessary to collect data to analyze sources of impairments and potential mitigation measures, pursue grants, and coordinate activities among all of the various stakeholders.

The TMDL Implementation Plan also provides for an initial phase of data collection and analysis necessary to determine if a Use Attainability Analysis, Site Specific Objective or other regulatory actions such as modifications to TMDL numeric targets, Load Allocations or Waste Load Allocations are appropriate. The Storm Water Quality Standards Task Force (SWQSTF) was created to reevaluate Water Quality Standards as they relate to storm water and dry weather flows within the Watershed necessary to protect REC-1 beneficial uses. Changes to the Water Quality Standards and an evaluation of beneficial uses would be incorporated into the Basin Plan through the Triennial Review process.

A $600,000 grant for this TMDL has been received to be used primarily for monitoring efforts. Currently a source assessment is underway to identify urban sources. In addition a Use Attainability Analysis has been conducted to very recreational uses and water contact recreations that are occurring in waters that impact the Santa Ana River. Monitoring efforts will continue to be developed through stakeholder groups.

13.5.3 Permittee Compliance Strategy

13.5.3.1 Implementation Plan

The TMDL recognized the efforts to amend REC-1 Water Quality Standards by the SWQSTF. Therefore, per USEPA guidance, the TMDL is phased. It is expected that the SWQSTF will change the Water Quality Standards and Beneficial Uses through the Basin Plan's Triennial Review process. Phase 1 is a data collection effort. In order to properly channel funds to efforts that will result in the greatest benefit toward TMDL compliance, Phase 1 of the TMDL is pending results from the SWQSTF. Phase 2 is implementation of waste load and Load Allocation compliance strategies, which will follow Phase 1 tasks and are due to be completed by 2020.

13.5.3.2 Overall Approach to Achieve Waste Load Allocations

Once the TMDL and basin plan amendments have been adopted, the specific tasks that are assigned to all stakeholders including Permittees will be identified in this section, per the Implementation Plan.

13.5.3.3 TMDL Task specific to Permittee Dischargers

Once the TMDL and basin plan amendments have been adopted, the specific tasks that are assigned to all stakeholders including Permittees will be identified in this section, per the Implementation Plan.

13.5.3.4 Other TMDL Task which include Permittee Dischargers

Once the TMDL and basin plan amendments have been adopted, the specific tasks that are assigned to all stakeholders including Permittees will be identified in this section, per the Implementation Plan.

13.5.3.5 Effectiveness analysis

The existing effectiveness and qualitative assessments described in Section 12 of the DAMP meet TMDL BMP evaluation requirements. In summary, the Permittees annually review their programs for indications of internal process/procedure deficiencies that need to be addressed to properly implement specified BMPs. Every five years as part of the ROWD the Permittees evaluate the overall effectiveness of their MS4 programs, including attainment of specified Waste Load Allocations and TMDL implementation plan requirements and make appropriate changes to MS4 Permit compliance programs.

13.5.3.6 Monitoring for TMDLs

Urban Waste Load Allocation compliance monitoring is achieved through the TMDL Implementation Plan. The monitoring program is administered by the TMDL Task Force to determine compliance with TMDL Waste Load Allocations and Load Allocations. The monitoring program is supported by District staff and funding from the Permittees. The TMDL Task Force prepares and submits annual reports on behalf of the Permittees.

In addition, the Permittees' NPDES MS4 Monitoring Program also collects data on pathogen discharges. The Permittees also participate in regional monitoring efforts sponsored by the Storm Water Monitoring Coalition, the Southern California Coastal Watershed Research Group, California Stormwater Quality Association, and other groups as appropriate. Data and conclusions from these programs are analyzed and summarized as part of the Permittees' Annual Monitoring Reports.